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ABSTRACT

Funding problems in special education are examined and a model for developing an appropriate funding model is described, with particular emphasis on funding special education in Arizona. In an introductory chapter, the funding problem is reviewed nationally and in the state of Arizona; and the problem is summarized into questions which involve the amount of money needed and the source of funds, the method of cost analysis to determine costs and distribution of available funds, and the selection of special education programs to be developed and funded. Reviewed in chapter 2 are the National Education Finance Project and the Report by the Management Analysis Center for the Bureau of Education for the Handicapped, and proposed is a format for examining special education costs which shows the interrelationship of the three components--type of handicap, severity of handicap, and delivery method--in a three-dimensional configuration. Fiscal data relating to the growth of special education programs in Arizona are presented, changes in state funding policies are analyzed, and available statistics on expenditures for special education in the state are summarized in chapter 3. A final chapter contains a format for the determination of an appropriate funding method which follows the following sequence: (1) identification of general educational purposes, (2) development of an appropriat funding method, and (3) articulation of specific procedures attending the developed funding method. Appendixes include forms and procedures for the analysis of state special education reimbursement patterns and the analysis of special education expenditures, state regulations relating to special education budgeting for 1974-75, and a format for conputing excess cost of special education in Arizona. (SBH)

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SPECIAL EDUCATION

METHODS FOR FUNDING SPECIAL EDUCATION: A MODEL FOR ANALYSIS AND COMPARISON

by

Charles Essigs and Joseph S. Engle

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CHAPTER I

INTRODUCTION

The Problem Nationally

Recently, Special Education was designated by the Education Committee of the States (1973) as the number one educational challenge facing the nation. Lending support to this contention is the increasing frequency with which our courts are encountering civil cases questioning the responsibility of our schools to provide appropriate educational programs for the handicapped.[1] These developments, and the combined influence of special educators, parents of handicapped children, and other concerned parties, have prompted state legislative leaders to develop legislation establishing compulsory educational programs for the handicapped.

Concomitant with the increase in mandatory programs has been a tremendous increase in fiscal expenditures. In 1950 the federal government spent about one million dollars on educational programs for the handicapped, but by 1973 the federal expenditure level had risen to $314.9 million--an increase of over 300-fold (Kakalik, 1973). However, this

---

[1]Prominent cases are Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania, 334 F. Supp. 1257 (E.D. Pa. 1971) and Mills v. Board of Education of the District of Columbia, 348 F. Supp. 866 (D. D.C. 1972).

$314.9 million accounted for only 11.74 percent of the total expenditure level for special education. Significantly, state and local expenditures amounted to approximately $2.4 billion (Kakalik, 1973).

With state and local educational agencies assuming major responsibility in the funding of special education programs, even a cursory examination raises serious questions concerning the ability of these agencies to supply adequate fiscal support in the future. For example, Louisiana recently estimated that a 93% increase in funds would be needed to provide special education services for all eligible students in the state. New Mexico needed a 300% increase in funding at the state level from 1972 to 1973 (Bernstein, 1974). In Arizona the state support level for special education rose from $1.3 million in 1972 to over $16 million in 1975.

The report of the Education Commission of the States (1973) stressed that increased funding will be necessary to meet the demands arising from increased educational services for handicapped children. With this increase in funding, the need to develop effective methods to analyze special education costs becomes an especially critical issue. Legislators, educators, and the public in general are demanding information regarding the cost of special education programs for which public funds are providing support. Systems of cost accounting must be developed which will allow for the analysis

of special education expenditures so that varying costs of programs can be viewed in clear and consistent terms.

The Problem in Arizona

Arizona is presently one of at least forty-eight states which are under legislative mandate to provide special education services for handicapped children. Implementation of mandated programs creates increasing demands upon funds to support educational programs for exceptional children. For example, in Arizona the state legislature budgeted approximately ten million dollars in funds to support the excess cost of special education programs for the 1974-75 fiscal year; whereas the state's school districts requested 16.2 million dollars from the Arizona State Department of Education. Thus, the state legislature had to confront the problem of either raising the additional funds to cover the difference or decreasing the level of state support. In anticipation of this programmatic growth the excess cost level has been set at 30 million dollars for the fiscal year 1975-76.

What has become apparent is that in order for deliberate decisions to be made on fiscal questions, Arizona's Department of Education must have some effective system for analyzing the cost of the educational programs for exceptional children.

The Problem in Local School Districts

Most fundamentally, the local districts are faced with the problem of cost analysis, since the State Board of Education has mandated that each district must submit district plans for providing for special education services for handicapped children. The target date for the implementation of this plan is on or before September 1, 1976. State regulations necessitate that each district fulfill the following requirements related to the cost analysis of alternative service delivery models:

> If facilities, supportive personnel, certified instructional personnel, or transportation is not immediately available to serve the needs identified above, the district will need to accomplish a cost analysis comparing three possible service delivery models.
>
> 1. Initiating or expanding a district special education program with suitable facilities, supporting personnel, and transportation for all identified handicapped pupils.
>
> 2. Initiating or expanding by intergovernmental agreement, cooperative programs with one or more districts, counties, or state agencies. This will require joint planning with other agencies or districts.
>
> 3. Contracting for the service necessary to provide special education programs for handicapped students with other public or private schools, institutions, or person(s) approved by the Division of Special Education.
>
> The cost analysis should take into account all phases of the program need that has been identified in Section A above. It should allow for a clear comparison of costs between the three delivery approaches. Advantages and disadvantages of each approach should be stated. The feasibility of combining approaches, (e.g., some

> district operated programs, some cooperative programs, etc.) should be analyzed. The quality of services to be provided should be given primary consideration (Special Education Administration Rules and Regulations, 1974, Section 1, p. 16).

In order for districts to comply with this section of the mandate, a system for analyzing data must be developed and figures relating to district costs in the state must be established.

Statement of the Problem

Perhaps the problem can best be summarized by forming three questions:

1. How much money will be needed to support special education programs and who should provide these funds?
2. What method of cost analysis should be used to determine the costs and distribution of the available funds?
3. What special education programs should be developed and funded?

A complete answer to these questions would require the development of a state plan for special education. This report does not attempt to complete this task but rather presents information collected in an effort to answer the first two questions, given the method of funding presently used in Arizona. Hopefully, the information collected and presented here will be of benefit to those engaged in making the decisions involving all three questions.

CHAPTER II

REVIEW OF RELATED LITERATURE

Studies of the cost of special education are rather recent in nature. Consistently, these studies have indicated that special education services for exceptional children are expensive programs, a conclusion that was evident even before systematic studies of special education programs were initiated. Despite the appearance that special education programs are excessively expensive, such programs can be, in the long run, sound investments.

The reasoning behind this standpoint is succinctly stated in the following:

> From the point of view of the state and society it is economically sound to educate the retarded child. It is less costly to provide a special education program that will enable these persons to care for themselves either partially or totally than it is to support them on public relief or in institutions for the feebleminded or the delinquent. (Kirk and Johnson, 1951, p. 6).

And, in support of this view, Gene Hensley, Director, Handicapped Children's Education Project, observes that,

> When it comes to the education of handicapped children, it is time to accept one proven fact: while special education programs can be expensive, educating the handicapped can be cost beneficial. (Financing Education Programs for Handicapped Children, 1974, p. 3).

A second, and perhaps more profound, reason for spending money on the education of the handicapped may be posited.

This justification rests on the inherent requirement that a democracy be composed of an enlightened citizenry; for with an educated populace, growth not only of the individual but of society is enhanced. A famous federal court decision reflected this viewpoint in the rationale of its controversial decision. The opinion noted

> 'The pivotal position of education to success in American society and its essential role in opening up to the individual the central experiences of our culture lend it an importance that is undeniable.' . . . Thus, education is the lifeline of both the individual and society.[2]

Dr. William McLure has incorporated this argument to serve as an assumption for his recent study of special education in the state of Illinois. He states:

> The fulfillment of all individual needs is the most important idea that will shape future fiscal policies in special education, and in all other phases of education. Thus education is potentially one of the greatest growth enterprises in this nation, despite the current decrease in school population. (McLure, 1975, p. 7).

Proceeding from these two assumptions, that expenditures for special education are desirable, several studies attempting to identify the variation of costs among programs are of interest.

---

[2]Serrano v. Priest, 5 Cal. 3d 584, 96 Cal. Rptr. 601, 487 O. 2d 1241 (1971). For a similar argument see Brown v. Board of Education of Topeka 347 U. S. 483, 74 S.Ct. 686, 98 L.ED. 873 (1954).

Cost Studies in Special Education

National Education Finance Project. This project was the first comprehensive national study of school finance in over thirty-five years. (Johns, Alexander, and Rossmiller, 1968). The two studies from the project relating specifically to costs of special education programs were done by Rossmiller, Hale, and Frohreich (1970) and McLure and Pence (1970). Both of these studies developed a cost index for the programs under study. This cost index was a ratio of the cost of programs for exceptional children to the cost of programs for regular students.

The study by Rossmiller, Hale and Frohreich (1970) consisted of a select sample of twenty-four school systems from the states of California, Florida, Texas, New York, and Wisconsin. These states and the specific schools were selected by a group of special education experts as having comprehensive programs which were providing services for all categories of handicapped children. Other factors considered in the selection were various social, economic, and demographic aspects of these school districts. The data from these studies were also utilized in a study by Bentley (1970) in which he examined the nature and consistency of the cost differentials existing between programs for exceptional students and those for regular students.

Recent studies by Sorenson (1973) and Clemmons (1974) have collected information on costs of special education

programs in selected school districts. Clemmons examined six school districts in Minnesota, while Sorenson reviewed seven Illinois school systems. Both of these projects utilized techniques similar to the earlier studies by Rossmiller, Hale, and Frohreich (1970) and McLure and Pence (1970).

Most recently McLure (1975) used the cost index approach to analyze total education expenditures in twenty-three school districts in Illinois. In this study Mr. McLure found that, "The pupil teacher ratio, or average number of pupils per certified teacher is found to be a suitable measure on which to formalize costs." (McLure 1975, p. 16).

Method I illustrates the type of data which results from a cost index approach.

METHOD 1

COST INDEX--EXAMPLE

Category of Exceptionality	Per Pupil Cost of Regular Education	Per Pupil Cost of Special Education	Cost Index
Educable Mentally Retarded	$1,000*	$1,500	1.50
Trainable Mentally Retarded	$1,000	$1,750	1.75
Visually Handicapped	$1,000	$3,200	3.20
Speech Handicapped	$1,000	$1,250	1.25

*All figures are hypothetical

The data from Method I provides some information for analyzing special education costs. In this example the educational programs for the trainable population are more expensive than the educational programming for educable students. The programs for the visually handicapped are the most expensive in this example. However, little information is available about how funds are being spent in relation to the provisions for service delivery in each particular area of exceptionality. Secondly, the cost index for special education programs is tied to the regular education costs. The regular educational program may be operated either efficiently or inefficiently, which, in turn, would influence the special education index. Therefore, the validity of the special education cost index as a measurement of the relative cost of providing educational programs is dependent upon the per pupil cost for regular educational programs.

Method II demonstrates the use of the cost index in analyzing special education expenses between districts. It illustrates the difficulty of making a comparison which relies upon a base unit of measurement. The base unit of measurement, which is the cost of regular education, sometimes varies from district to district. Thus, changes in cost indices may be reflecting variations in regular education programs rather than changes in special education programs.

METHOD II

COST INDEX OF DISTRICT EXPENDITURES--EXAMPLE

Category of Exceptionality	District A	District B	District C
Educable Mentally Retarded	1.50*	1.80	2.00
Trainable Mentally Retarded	1.75	1.75	2.00
Visually Handicapped	3.00	3.84	2.90
Speech Handicapped	1.25	1.25	1.35

*All figures are hypothetical

If the information in Method II is used to analyze expenditures, many problems affecting the validity of such an approach may surface. For example, a cursory examination of programs for the educable mentally retarded would indicate that District A is more efficiently providing services for this group of handicapped students. However, if additional information is obtained, the regular education cost in District A is $1,000 and in District C, it is $500. Therefore, the total cost for programs for educable mentally retarded in District A is $1,500 and in District C, it is $1,000. The possible source of discrepancy may be the inefficient delivery of services for regular students in District A rather than a discrepancy in special education delivery costs for a total of $500 in excess costs exists in both districts.

The problems associated with the analysis of costs could be more adequately investigated if cost categories

were studied in detail. Method III demonstraces what an in-depth look at costs could be in a cost category. This method gives more appropriate information than just a total program index, for it provides some indication as to where a district's funds are being utilized in a special education program.

METHOD III

EXPENDITURE BY FUNCTION--EXAMPLE

Category	Cost Per Pupil Regular Education Program	Cost Per Pupil Special Education Program	Cost Index
Administration			
Certified Salaries	$ 28.00	$ 56.00	2.00
Classified Salaries	12.00	15.00	1.25
Travel	8.98	21.58	2.40
Supplies and Materials	1.48	2.35	1.59
Other Operating Expenses	0.58	0.78	1.34
Instruction			
Certified Salaries	$320.00	$524.00	1.64
Classified Salaries	5.00	35.00	7.00
Travel	0.58	1.24	2.14
Supplies and Materials	22.00	37.00	1.68
Other Operating Expenses	2.00	2.58	1.29

*All figures are hypothetical

If we examine these data closely, the sources of cost variation may be recognized and an analysis then undertaken in that particular category. The difference in certified salaries in the area of instruction might be examined in detail, and the cause of such variation traced to the lower pupil/teacher ratio required to adequately serve the educational needs of this particular population of exceptional students. If a pupil/teacher ratio of 30:1 exists in the regular program and 15:1 exists in the special education program, a 2.0 cost index could be justified easily. This type of analysis could be carried further by taking a particular category and examining that category in more detail.

Method IV is an example where instructional support salaries are examined in detail to determine sources of cost variation.

METHOD IV

ANALYSIS OF COST FUNCTIONS
OF INSTRUCTIONAL SUPPORT SALARIES--EXAMPLE

Category	Cost Per Pupil Regular Education Program	Cost Per Pupil Special Education Program	Cost Index
Health Services Nurse	$ 45.50*	$131.95	2.90
Psychologists	10.00	32.50	3.25
Psychometrists	8.00	8.00	1.00
Social Workers	10.00	10.00	1.00
Physical Therapists	0	110.00	N.A.
Guidance Counselors	58.00	78.00	1.34
Work Study Coordinator	6.50	95.50	14.69

*All figures are hypothetical

Using this more sophisticated method of analysis, the actual variation in areas of expenditure can be determined, and an attempt can be made to discover the causes of such variation. If the program under study in Method IV had a group of physically handicapped students who needed appropriate health services and intensive vocational training, the variation in cost would seem to be justified for the areas dealing with health services, physical therapists, and vocational training. This approach involves a cause-effect program relationship to be established and involves studying costs, program offerings, and needs of the special education population.

To fully benefit from this type of analysis, the goals and objectives of a program must be established so that the analysis of costs will be made against the intent of reaching desired program outcomes. If the intent of the program under observation in Method IV is to develop vocational competencies in students, this would provide a framework for viewing special education costs in relation to meeting program goals. For this particular system to be successful, educational goals must be presented in specific and measurable terms so that evaluation procedures can be established.

Ernst and Ernst Report. As an alternative to the cost index approach, the Ernst and Ernst report develops and uses a "student education unit" as a measure of comparison between regular and special education.

This technique has two distinct measures: units of service and units of price. The Ernst and Ernst Student Education Service Unit (EESEU) defines the unit of service as a ten-minute period and each activity in the educational process can be defined in this unit of service term. For example, a daily thirty-minute fifth grade class in arithmetic would be described as three EESEUs of reading at grade level five. The content of the arithmetic instruction within the full school year might be described as 876 EESEUs or 8760 minutes of instruction in arithmetic. In this manner each unique activity within the curriculum can be quantified in terms of units of time. Once this breakdown is made, costs can then be assigned or allocated by unit of service.

With utilization of the EESEU approach, a total rate or cost for each EESEU can be established in measureable terms. In addition, educational costs can be examined in terms of delivery of units of service. An express cost is associated with each unit of service delivered to the students. From this system a planned rate of delivery of a unit of service can be developed and compared to actual delivered units of service. The development of the EESEU concept is a new process and additional information may be obtained by a closer study of the Ernst and Ernst report.

The EESEU is an alternative to the cost index in providing quantifiable data on costs of programs. Method V

demonstrates the type of information that would come from such a study of the educational process in a particular school district.

METHOD V

AN ANALYSIS OF COSTS
USING THE ERNST AND ERNST STUDENT EDUCATION UNIT--EXAMPLE

Grade 5

Activity	EESEU	EESEUR	EESEUV
Homeroom	183	.0759	$13.49
Geography	543	.0817	$44.36
Mathematics	876	.786	$68.85
Spelling	552	.0784	$43.28
Health	222	.0789	$17.52

Underlying the presented cost analysis method, the report stressed the following basic concepts that have been used in private industry to analyze costs. The report stated that program budgeting should include:

1. Establishing goals, objectives, and program budgeting;
2. Cost effective accounting; and,
3. Integrated reporting system.

The Ernst and Ernst report emphasized that the establishing of goals and objectives was one of the important jobs of the professional educator. Once these goals have been stated, it then becomes necessary to identify or develop specific

educational programs structured so as to provide the level of performance needed to meet these goals. (Ernst and Ernst Study, 1974). The cost data from the EESEU would give information on developing costs for options or alternatives in delivery of services. However, the use of a cost index or the EESEU can only facilitate cost analysis by measurement of program offerings in relation to the intent (goals and objectives) of the program under discussion.

Report by Management Analysis Center, Inc. for the Bureau of Education for the Handicapped. The primary purpose of this report was to review the literature pertaining to the financing of educational services for the handicapped. A large portion of the report was devoted to a critical review of the various studies done under the model proposed by the National Education Finance Project and the work produced by Ernst and Ernst. In general, the report criticized the two studies for being empirically, rather than judgmentally-oriented. In other words, the findings of NEFP and Ernst and Ernst were based upon past information and thus served to give little information about future needs; the assumption being that present programs are derived from desired futures and not from completed actions. The specific criticism of each study is similar to that offered in the present report.

Management Analysis Center's report suggests that, rather than relying solely upon empirical data, fiscal

problems should be approached with a judgmental model. That is, the purposes of expenditures should be clearly defined prior to the determination of financing procedures. In order to facilitate such an approach, alternative programs for education of the handicapped must be viewed in light of specific characteristics. Thus, programs addressing particular handicap categories should be compared with one another, and aggregated cost figures representing several programs should only be used to examine similar fiscal questions. Figure 1 illustrates a fundamental approach to program comparison.

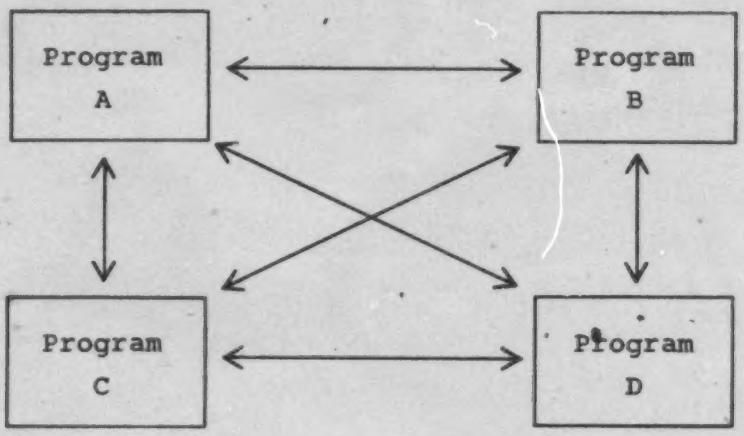

Fig. 1. Programs for Educating the Visually Handicapped

Merely to compare costs, even at this level results in misleading information; the Management Analysis Center's report suggests that two more primary components must be identified and compared when examining relative costs of

alternative programs. The two components are the severity of the handicap (i.e., mild, moderate, severe) and the type of delivery method used to educate the student (i.e., self-contained, resource, itinerant). Figures 2 and 3 illustrate the interaction of these components as presented in the report.

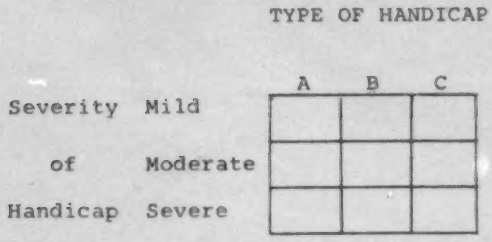

Fig. 2

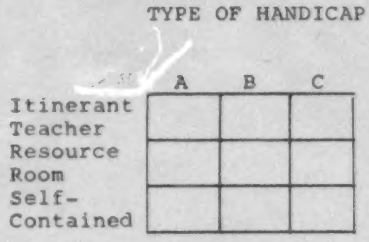

Fig. 3

An Alternative Format For Examining Special Education Program Costs[3]. Perhaps a more powerful way of conjoining the three components (type of handicap, severity of handicap, and delivery method), which were identified in the report of the Management Analysis Center would be to present them in an interrelated format. This can be done by way of a three-dimensional configuration. An example is given in Figure 4.

[3] This format is based upon the work of Drs. T. Frank Saunders and Roy F. Blake, The University of Arizona, and Dr. Colleen Decker, Pima Community College.

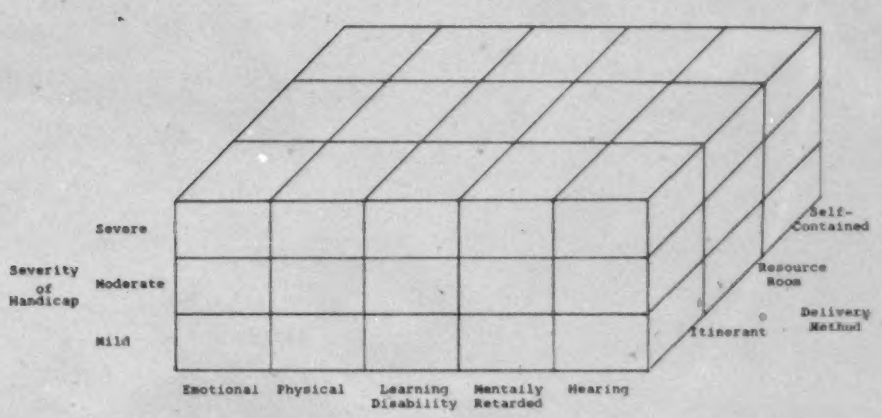

Fig. 4 Format for the Interrelation of Cost Components

This arrangement provides a format for the organization of more precise information about the cost of a school system's expenditures by itemizing the individual cost components. The use of this format enhances the possibility of making meaningful interschool-system comparisons, and also, provides a basis for examining specific special education expenditures within a given system.

To illustrate the application of this format, assume that a program is to be developed for three categories of handicaps: hearing, physical, and emotional; and that these handicaps are classifiable into three types: mild, moderate, and severe. Also, for each category and severity of handicap, the type of program used to supply the service (for example, itinerant teacher, resource room, and self-contained) are differentiated. The advantage of this format

is that components within the system may be compared more accurately. For example, the cost of providing a resource room for the mildly emotionally handicapped child (Figure 5, Module 2) can be compared with the cost of providing an itinerant teacher for a child of the same handicap classification (Figure 5, Module 1).

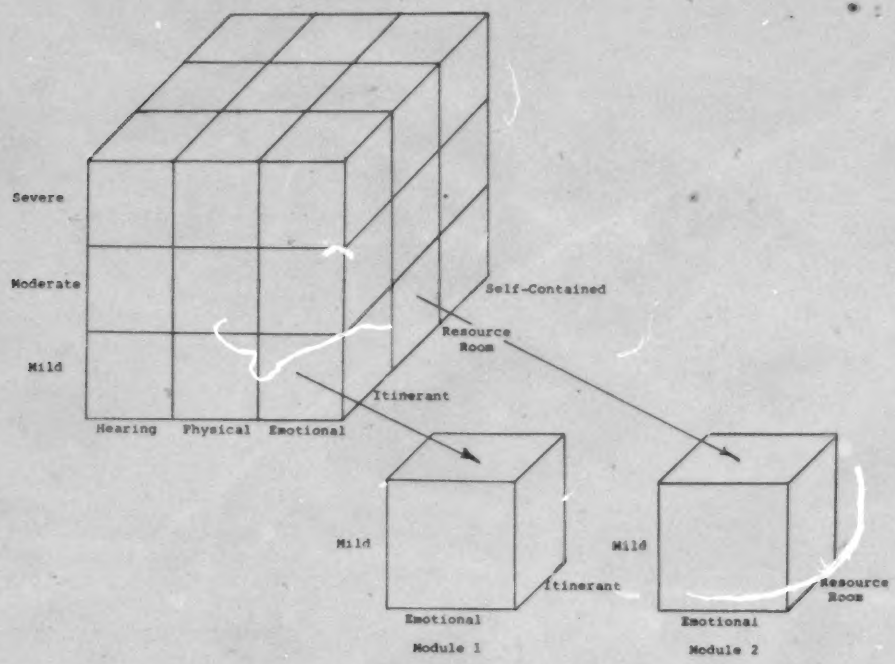

Fig. 5 Intra-School System Cost Comparison

Inter-system comparisons can also be made after school systems have itemized their respective costs according to the proposed format. These comparisons can be made by module costs; specific program types addressing particular handicap needs of one system can be compared with other districts' program types addressing the same education need in

a similar manner. If this comparison is not possible because of radical differences between approaches, at least the fundamental variable contributing to variations in cost can be held constant while inspections are made. This point is shown in Figure 6.

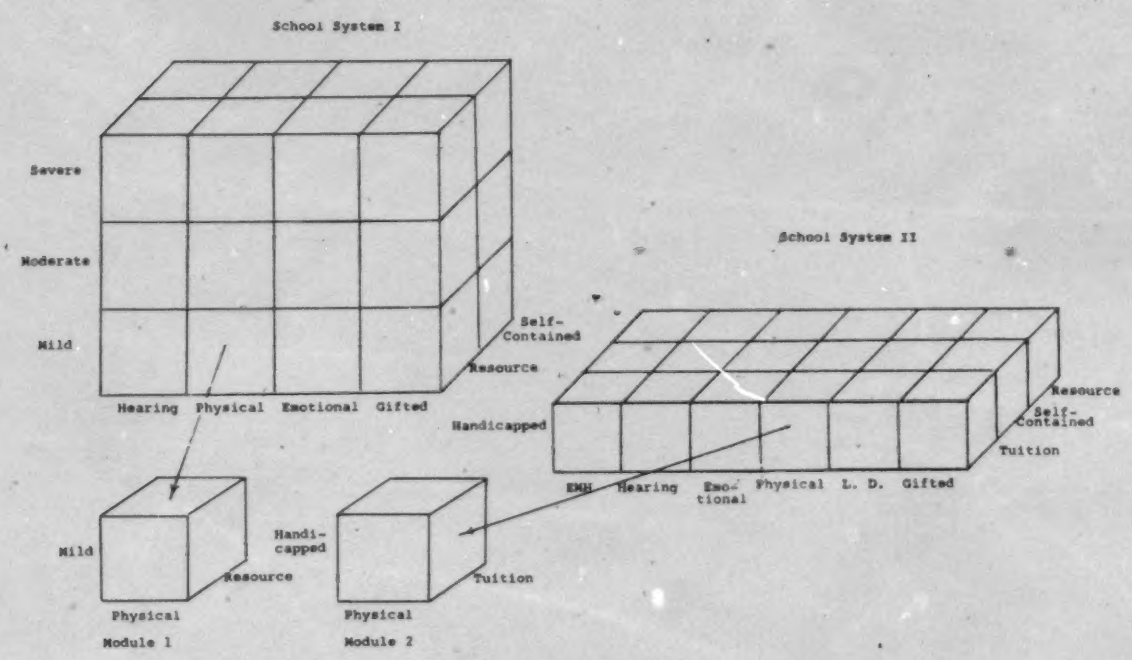

Fig. 6 Inter-School System Cost Comparison

Comparison of the two school systems can be accomplished in light of the evident differences. In other words, suppose that System I was concerned about its cost for educating the mildly physically handicapped in a resource classroom. Although System II lacks a direct module for comparison, an indirect comparison can be performed. This can be accomplished by comparing the appropriate module from System I with the module from System II designed to facilitate a similar purpose.

What has been suggested in the report of the Management Analysis Center is the need for, and the basic components of, a common base for discussion about the cost of educational programs. The present report has attempted to further integrate these components through the development of an integrated format.

As the example shows, the proposed format can be used for the collection, classification, and comparison of financial data. However, the strength of this approach lies more heavily with its judgmental power, for once the components are identified and the purposes of the program are clearly stated, the costs of operating the programs can be determined and decisions can be rendered prior to initiation of the financing procedure.

Studies	Method of Analysis	Description of Method	Purpose	Criticisms
National Education Finance Project	Cost Index	Relationship of special education to regular education expenditures expressed as the ratio of special to regular education expenditures	To develop information on the relative costs of special education programs and the resource inputs which contribute to those costs.	1) Since the cost index is composed of special and regular education costs, changes in an index figure may be the result of changes in the cost of special education or any combination thereof. 2) Reflecting aggregated program costs, the cost index is sensitive to internal variations in cost, but insensitive to identifying the factors causing those cost variations. 3) The cost index is a measure of the past expenditures for special education programs and this is not sufficient for use in designing future programs.
Ernst and Ernst	Student Education Unit (EESEU)	Ten-minute unit of educational services	To develop a system which would be of benefit in determining methods for reimbursing school districts for costs of educating special education students	1) Due to its complexity, the employment of the method would require an exhorbitant amount of time and energy to manage this bookkeeping system. 2) Educational services cannot be treated as a constant input variable since all ten-minute units of time are not equally productive. 3) Fails to account for the relationship between instructional programs; e.g., the effect that a special education instructional program may have upon the student's activity in other regular programs.
Management Analysis Center	Comparative Analysis of Existing Research	Aggregation of conditions affecting the delivery of service to handicapped children	To review and evaluate existing literature and current state policies relating to special education finance in order to assist those responsible for making educational finance decisions	The proposed framework for viewing specific program characteristics fails to adequately integrate the characteristics.

Fig. 7 Summary Sheet: Cost Studies

CHAPTER III

FUNDING SPECIAL EDUCATION IN ARIZONA

The primary purpose of this chapter is to present fiscal data relating to the growth of special education programs in the state of Arizona. In addition, changes in state funding policies are analyzed, and available statistics on expenditures for special education in the state are summarized and presented. This information is needed for very little is presently known concerning expenditures for special education programs, reimbursement patterns, and how expenditure components vary within programs. As the Special Education mandate approaches, legislators, educators, and taxpayers are increasingly asking for just this type of information.

Special Education Finance

The financing of special education in Arizona has recently undergone a fundamental change. Prior to the 1974-75 school year, special education programs in the state were reimbursed using a straight sum formula. Under this straight sum funding formula the state would reimburse the local district a fixed amount of money which varied according to the category of handicap. Figure 8 presents the amounts that were provided under this straight sum funding formula.

Category	State Funds	County Funds
Educable Mentally Handicapped	$380.00*	$10.00*
Emotionally Handicapped	380.00	10.00
Homebound	526.00	10.00
Multiple Handicapped	580.00	10.00
Physically Handicapped	380.00	10.00
Trainable Mentally Handicapped	690.00	10.00
Gifted	50.00	---
Speech	50.00	---

* Per Unit of Average Daily Attendance Per Annum

Fig. 8 Arizona Straight Sum Reimbursement By Special Education Category for 1973-74

Under this approach the state provided $4,078,788.58 for the 1972-73 school year and $5,132,317.58 for 1973-74. The total county share was $83,313.43 for 1972-73 and $96,664.07 for 1973-74. With the adoption of new legislation dealing with the special education mandate a new reimbursement formula was developed for the 1974-75 school year. Figure 9 shows the growth in the apportionment of state funds to special education from 1965-66 to 1973-74 under this straight sum reimbursement method.

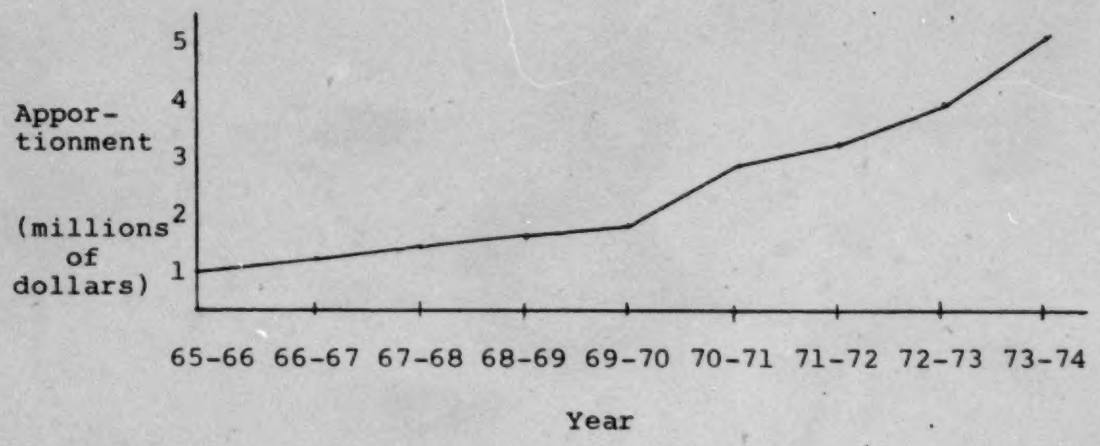

Fig. 9 Apportionment of State Funds to Local District for Special Education 1965-66 to 1973-74

For 1974-75 Arizona utilized an excess cost formula to provide state reimbursement for special education programs. Under this approach school districts compute the cost of educating a handicapped child and then subtract from this amount the average cost of educating a child in the district's regular program. The state will then reimburse 90% of the excess cost. A maximum per pupil limit has been established by the state. The allowable excess cost is not to exceed the basic support level per state supported classroom divided by twenty-six for a common school district or twenty-four for a high school district (ARS 15-1017). This funding method for special education was part of a new comprehensive public school finance program in the state. The state share for the excess cost of special education under this method was over 16 million dollars for the 1974-75 school year.

Special Education Enrollment Trends

Analysis of recent enrollment trends in special education demonstrates that increasing numbers of students are receiving services. From the 1972-73 to the 1973-74 school year a 29.8% increase occurred in special education enrollment in the state. For the 1974-75 school year the number of special education students reported for state aid increased to over 27,000 students. Information has been compiled on the numbers of regular education and special education students from 1965-66 to 1973-74. Table 1

(page 29) depicts the percent of students served in special education programs at the elementary and secondary level. The number of students served includes only those students reported for state aid. It should be noted that the percentage of students served in special education has gradually increased at the elementary level from 1.02% in 1965-66 to 1.90% in 1973-74. This same trend is evident at the high school level where the increase was from 0.90% to 1.64%. A slight decrease occurred in 1970-71 at both the elementary and high school levels raising some doubt about the accuracy of information during this particular period of time. Since 1973-74, the number of students in special education programs has increased significantly. Table 2 (page 30) attempts to trace the increase in special education from 1965-66 to 1973-74 to place the 1974-75 and 1975-76 increases in perspective. This table examines the increases in regular and special education at the elementary and high school level. From Table 2 it is evident that the largest percentage increase in special education students (in excess of 20%) occurred in 1966-67 and 1973-74. Overall, the total percentage increase in special education students was 27.8% at the elementary level and 39.73% at the high school level. Table 3 (page 31) depicts the distribution of regular and special education students between elementary and secondary programs from 1965-66 to 1973-74.

TABLE 1

Percent That Special Education Enrollment Is Of Total Enrollment
In Arizona At The Elementary And Secondary Levels
1965-66 1973-74

LEVEL \ YEAR	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
Elementary									
Total	293,618	303,537	308,574	315,987	330,843	339,368	359,402	373,776	382,095
Regular Education	290,631	299,912	304,337	311,452	326,122	334,636	354,009	368,098	374,838
Special Education	2,987	3,625	4,237	4,535	4,721	4,732	5,393	5,678	7,257
Percent	1.02	1.19	1.37	1.44	1.43	1.39	1.50	1.52	1.90
Secondary									
Total	107,564	111,820	116,424	122,348	129,282	135,715	143,452	148,972	156,827
Regular Education	106,939	111,029	115,500	121,317	127,659	134,702	142,327	147,852	155,262
Special Education	625	791	924	1,031	1,623	1,013	1,125	1,120	1,565
Percent	0.58	0.71	0.79	0.84	1.26	0.75	0.78	0.75	1.00
Total									
Total	401,182	415,357	424,998	438,335	460,125	475,083	502,854	522,748	538,922
Regular Education	397,570	410,941	419,837	432,769	453,781	469,338	496,336	515,950	530,100
Special Education	3,612	4,416	5,161	5,566	6,344	5,745	6,518	6,798	8,822
Percent	0.90	1.06	1.21	1.27	1.38	1.21	1.30	1.30	1.64

Source: Annual Report of the Superintendent of Public Instruction, 1965-66 through 1973-74

TABLE 2

Percent of Increase of Regular and Special Education
Enrollment at the Elementary and Secondary Levels
1965-66 1973-74

LEVEL / YEAR	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
Elementary								
No. Increase in Regular Ed.	9,281	4,425	7,115	14,670	8,514	19,373	14,089	6,740
No. Increase in Special Ed.	638	612	298	186	11	661	285	1,579
Percent in Regular Ed.	3.19	1.48	2.34	4.71	2.61	5.79	3.98	1.83
Percent Increase in Special Ed.	21.36	16.88	7.03	4.10	0.23	13.97	5.28	27.81
Secondary								
No. Increase in Regular Ed.	4,090	4,471	5,817	6,342	7,043	7,625	5,525	7,410
No. Increase in Special Ed.	166	133	107	592	(610)	112	(5)	445
Percent Increase in Regular Ed.	3.82	4.03	5.04	5.23	5.52	5.66	3.88	5.01
Percent Increase in Special Ed.	26.56	16.81	11.58	57.42	(37.58)	11.06	(0.44)	39.73
Total								
No. Increase in Regular Ed.	13,371	8,896	12,932	21,012	15,557	26,998	19,614	14,150
No. Increase in Special Ed.	804	745	405	778	(599)	773	280	2,024
Percent Increase in Regular Ed.	3.36	2.16	3.08	4.80	3.43	5.75	3.95	2.74
Percent Increase in Special Ed.	22.26	16.87	7.85	13.98	(9.44)	13.45	4.30	29.77

Source: Annual Report of the Superintendent of Public Instruction, 1965-66 through 1973-74
Information for 1965-66 not available

TABLE 3

Percent that Elementary and Secondary Education Is Of Total Enrollment for Special, Regular, and Total Enrollments

YEAR / GRADE LEVEL	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
Special									
Elementary	82.70	82.09	82.10	81.48	74.42	82.37	82.74	83.52	82.26
Secondary	17.30	17.91	17.90	18.52	25.58	17.63	17.26	16.43	17.74
Regular									
Elementary	73.10	72.98	72.49	71.97	71.87	71.30	71.32	71.34	70.71
Secondary	26.90	27.02	27.51	28.03	28.13	28.70	28.68	28.66	29.29
Total									
Elementary	73.19	73.08	72.61	72.09	71.90	71.43	71.47	71.50	70.90
Secondary	26.81	26.92	27.39	27.91	28.10	28.57	28.53	28.50	29.10

Source: Annual Report of the Superintendent of Public Instruction, 1965-66 through 1973-74

The relationship between elementary and secondary students in special education has remained rather consistent. It should be noted that the discrepancy which appears for 1969-70 may be traced to an inaccurate count of the number of high school special education students during that period of time. In comparing regular education to special education, a discrepancy appears which indicates a larger percentage of special education students received services at the elementary level. Several factors may be involved in this situation: Special education programs may be returning handicapped students to regular programs and/or many special education students are not receiving needed services at the secondary level, or both factors may be operating simultaneously. Table 4 (page 33) presents special education ADM by category of exceptionality. Within the state variation exists in the percentage of school ADM receiving special education services. For example, in 1974-75 Maricopa County had the largest percentage of school ADM (6.73%) in special education whereas Greenlee County had the smallest percentage (1.23%). On the other hand, only in Maricopa and Pima Counties were all special education categories represented. The state total, not including speech handicapped students, was 3.42% and with speech students the total was 5.78%.

Changes in the number of students served is illustrated in this manner so that increases in expenditures for special education programs can be placed in a meaningful context.

TABLE 4

Percentage of School ADM Being Served in Special Education Programs by Category and County 1974-75

Special Ed. Category / County	1974-75 Total ADM	Percent Special Education Cost Is Of Total ADM											
		SH	SLD	EMH	EH	TMH	HBD	HH	PH	VH	MH	Total w/o SH	Total
Maricopa	257,160.37	2.89	1.52	1.28	.39	.33	.17	.05	.04	.05	.01	3.84	6.73
Mohave	8,283.37	1.63	3.42	1.16	.39	--	.01	--	.02	--	--	5.00	6.63
Pima	90,643.05	2.51	1.27	1.24	.22	.27	.10	.04	.04	.01	.01	3.20	5.71
Pinal	20,928.64	2.45	.88	1.08	.06	.32	.005	.005	--	--	--	2.35	4.80
Coconino	13,841.19	.98	.92	1.42	.85	.24	.20	--	--	--	--	3.63	4.61
Yuma	17,267.82	2.08	.85	.72	.16	.16	.16	--	--	--	--	2.05	4.13
Cochise	18,191.71	1.95	.59	1.03	.14	.12	--	--	--	.03	--	1.91	3.86
Navajo	11,976.37	--	1.14	2.31	.12	.19	--	--	.03	--	.01	3.80	3.80
Gila	7,680.49	.47	1.69	1.35	.17	.09	--	--	--	.01	--	3.31	3.78
Santa Cruz	5,192.31	.48	1.27	.77	.02	.46	--	--	.02	--	.02	2.56	3.04
Yavapai	10,069.58	.89	.36	1.23	.08	.25	.11	.01	--	--	--	2.04	2.94
Graham	4,945.68	--	1.07	1.05	.47	.20	--	--	--	--	--	2.79	2.79
Apache	10,957.20	--	1.28	.83	.10	.05	.03	--	.02	--	--	2.31	2.31
Greenlee	2,998.28	--	--	.93	--	.30	--	--	--	--	--	1.23	1.23
STATE	480,136.01	2.36	1.35	1.24	.31	.28	.13	.04	.03	.03	.01	3.42	5.78

Source: Division of Special Education--District Enrollment Data, 1/15/75

The rationale behind such a presentation is the primacy of the handicapped student in the state's special education efforts. That is, unless information concerning student needs, based on the variables which affect these needs, is available, the data on the expenditures for special education programs and resulting reimbursement patterns lack a context for appropriate interpretations. Information is available on the numbers of children served, but detailed information on the characteristics of handicapped children and the services provided these children is not immediately evident.

Analysis of Reimbursement Patterns

The procedure for the reimbursement of special education programs in Arizona for 1974-75 has been discussed on page 25. In this section the effects of the funding formula will be analyzed in an attempt to discover relationships between programming and funding. Variations in existing reimbursement practices will be examined, and the causes of such variation will be investigated.

The basic premise behind the 90% reimbursement formula is that state funds should carry the extra fiscal burden of providing educational programs for the handicapped. The term "excess cost" applied to special education expenditures denotes costs beyond those which the school district should normally be asked to spend for educational programs. Under

this approach funds were distributed on a non-categorical basis both in terms of classification of students and expenditure components.

In order to determine the excess costs of special education programs, the Division of Special Education utilizes a format which accounts for the local district's responsibility in providing a basic expenditure level for all handicapped students. This method requires the local district to first assume responsibility for expenditures for a handicapped student equal to the amount spent for a non-handicapped student. For example, if the cost per handicapped student in a self-contained special education class was $1800 and the cost to educate a regular student in the district was $900, the excess cost is $900. This figure is determined by subtracting the regular education cost from the special education cost on the assumption that all students in the district are eligible for the same basic level of fiscal support prior to establishing an excess level for special education. With resource programs, the entire cost is classified as excess cost, for in a resource room the district meets the requirement for providing the basic expenditure level by providing a regular classroom assignment for the special education student.

Utilizing this method, the excess cost varies significantly. Since the choice of programming should be based on the needs of handicapped students, decisions on the types of

programs to be provided should be based on providing appropriate services to handicapped students. However, the full impact of funding and its possible implications for decisions involving program development and implementation need to be investigated. Due to the design of the funding formula, under certain conditions it might be financially advantageous for districts to provide only certain types of services.

Conditions Affecting Reimbursement

Enrollment patterns in special education can alter the amount and percentage of state reimbursement at the local district level. Factors such as ADM being below maximum for a class unit and variations in the types of programs offered alter the percentage of state reimbursement considerably. Table 5 (page 37) presents a sample of districts from within the state and verifies the fact that reimbursement variation does exist. This random sample was chosen to demonstrate the need for future in-depth investigation of expenditure variation in the state.

The state support level for the excess cost of special education varies from 90% to 51.4% in this random sample. The state share on a per pupil basis also varies from a high of $717.43 to a low of $177.99. The source of variation may very well be linked to the types of services that these districts were or were not providing. The amount of state reimbursement is quite sensitive to enrollment in certain types of programs and particularly sensitive to the ratio of

TABLE 5

Variation in Percentage of State Special Education Reimbursement in Selected Arizona Districts*

District	Total Special Education ADM	Self-Contained ADM	Resource ADM	Speech ADM	Total Excess Cost	State Share of Excess Cost	District Share of Excess Cost	% of Excess Cost Paid By State	% of Excess Cost Paid By Local Districts	State Share Per Pupil
Sunnyside Elementary	618	168	180	270	$343,737.48	$309,364.00	$34,376.12	90%	10%	$500.58
Crane Elementary	81	15	---	66	34,630.17	31,167.16	3,463.01	90%	10%	427.53
Prescott Elementary	205	115	---	90	85,248.63	76,723.76	8,524.87	90%	10%	415.84
Casa Grande Elementary	150	24	90	36	115,619.85	104,057.87	11,562.08	90%	10%	693.72
Pinetop Lakeside Elem.	23	23	---	---	6,845.45	6,160.95	684.50	90%	10%	267.86
Bull Head City Elementary	89	1	58	30	73,853.59	63,851.72	10, 001.87	86.5	13.5	717.43
Cartwright Elementary	758	184	164	410	553,968.82	498,544.94	55,392.82	90%	10%	657.11
Clifton Elementary	53	6	17	30	22,576.94	20,319.25	2,300.50	90%	10%	383.38
Copper Belt Elementary	36	2	34	---	50,201.53	25,827.66	24,373.87	51.4	48.6	717.43
Pine Elementary	20	5	15	---	19,253.35	14,348.70	4,904.65	74.5	25.5	717.43
Grand Canyon Elementary	12	7	0	5	12,266.58	8,609.22	3,657.36	70.2	29.8	717.43
Page Elementary	45	3	0	42	46,584.62	32,284.58	14,300.04	69.3	30.7	717.43
Bisbee	88	22	0	66	17,403.76	15,663.38	1,740.70	90%	10%	177.99
Chinle	105	0	105	0	124,700.00	75,331.00	49,369.00	60.4	39.6	717.43

* Source: Form ADE-RB-5 Submitted to Division of Special Education.

speech students to special education students in other programs. This relationship becomes evident when enrollment is altered, and the resultant changes in state reimbursement are examined. In Figure 10 (page 39), the ADM in a program is adjusted to demonstrate changes in percentage of funds which are paid by the state. The costs are hypothetical but based on estimated expenditure levels in the state.

Figure 10 illustrates the effect that enrollment has upon the amount of reimbursement that a local district receives under the 1974-75 excess cost funding formula in Arizona. Without making any major changes in special education programs, the district in this example could receive a minimum of 42% and a maximum of 87% of excess cost paid by the state. The amount of reimbursement varies directly with the number of students receiving speech services and enrollment level per classroom. Figure 11 (page 40) demonstrates the effect speech enrollment has upon a district of 10,000 students operating a basic program with the only changes being the number of speech students and resultant additional costs. The district is hypothetical, but costs are based on estimated expenditure levels in the state.

By altering the number of speech students by 1.5% the district will change the rate of state reimbursement per pupil from $679 to $769, which would increase the total state excess aid by $107,614.50. If the district raises the number of speech students served to 5.0%, the state excess

Hypothetical Conditions:

Student Base of Approximately 200 Students (Regular ADM)
Speech Costs of $180 Per Pupil
Excess Costs of $20,400 Per Class--1 Resource Room with Administrative and Psychological Services

Resultant Reimbursement Patterns:*

	Enrollment Per Class	Example A No Speech	Example B 2.0% Speech	Example C 3.5% Speech	Example D 5.0% Speech
a) Total Excess Cost 20,400 +		20,400.00	21,120.00	21,660.00	22,200.00
b) Per Pupil Excess Cost Number of resource students and number of speech students	15	1,360.00	1,111.58	984.54	888.00
	12	1,700.00	1,300.00	1,140.00	1,009.09
c) State Reimbursement*	15	10,761.45	14,585.35	16,888.30	19,191.25
	12	8,609.16	12,282.40	14,585.35	16,888.30
d) District Cost	15	9,638.55	6,534.65	4,771.70	3,008.70
	12	11,790.84	8,837.60	7,074.65	5,311.70
e) % Paid By State	15	53%	69%	78%	87%
	12	42%	58%	67%	76%
f) % Paid by Local District	15	47%	31%	22%	13%
	12	53%	42%	33%	24%

* Computed using Form ADE-RB-5, State Division of Special Education

Fig. 10 Examples of the Effects of Enrollment Changes on Reimbursement

aid per pupil is $879 with an increase of $215,229.00 in state aid. This condition may alter planned district programs or penalize some districts which have limited numbers of children needing or receiving certain types of service.

Hypothetical Conditions:

Student Base of 10,000 Students
Speech Costs of $180.00 Per Pupil
Non-Speech Costs of $1,360.00 Per Pupil

Resultant Reimbursement Patterns*:

	Example A 2.0% Speech	Example B 3.5% Speech	Example C 5.0% Speech
a) Total Excess Cost	$852,000.00	$879.000.00	$906,000.00
b) Excess Cost Per Pupil	1,065.00	925.26	823.63
c) State Reimbursement	573,944.00	681,558.50	789,173.00
d) District Cost	278,056.00	197,441.50	116,827.00
e) % Paid By State	67%	76%	87%

* Computed Using Form ADE-RB-5, State Division of Special Education

Fig. 11 Examples of Effects of Enrollment Changes on Reimbursement

The amount of state aid that a district receives will vary in dollar amounts based upon whether the children are serviced in a resource room or a self-contained classroom. In the following example Figure 12 (page 41) the total amount of funds received from the state would be higher for a school district operating only resource programs. This example is a district offering special education programs

Directions from Form ADE-RB-5 to compute budget information	Example A: 30 students in self-contained programs	Example B: 15 students in self-contained programs and 15 in resource room	Example C 30 students in resource rooms
1. ADM in Programs			
a) ADM of students in Self-contained Programs	30	15	0
b) ADM of students in Speech Programs	0	15	30
c) ADM of students in Speech Programs	12	12	12
d) Total Special Education ADM	42	42	42
2. Non-Handicapped Cost			
a) Non-Handicapped per pupil Cost for Instruction	$ 658.00	$ 658.00	$ 658.00
3. Cost of Handicapped Programs			
a) Total budgeted cost for Special Education	$38,850.00	$38,850.00	$38,850.00
b) Multiply ADM in Speech and Resource by Non-Handicapped per pupil cost	$ 7,896.00	$17,766.00	$27,936.00
c) Add Line 3a and 3b to determine total cost of handicapped pupils	$46,746.00	$56,616.00	$66,485.00
4. District Excess Cost			
a) Handicapped Cost from line 3d	$ 1,113.00	$ 1,348.00	$ 1,583.00
b) Non-Handicapped Cost from line 2a	$ 658.00	$ 658.00	$ 658.00
c) Excess Cost per pupil subtract line 3b from 3a	$ 455.00	$ 690.00	$ 925.00
5. State and District Assistance for Special Education programs			
a) State excess cost assistance	$17,199.00	$26,082.00	$30,132.06
b) District Share	$ 1,911.00	$ 2,898.00	$ 8,717.94
c) Per pupil share from state	$ 409.50	$ 621.00	$ 717.43
d) % of excess cost paid by the state	90%	90%	77%

Fig. 12 Examples of Variations in Amount of State Aid For Self-Contained and Resource Programs*

*Projections based upon an equal pupil teacher ratio for self-contained and resource programs.

for 30 EMH students and 12 speech students. The method for developing cost is derived from form ADE-RB-5 from the Arizona Department of Education (See Appendix). This document is the official state worksheet for computing budget requirements for special education handicapped programs. The costs used in this example are actual costs taken from districts presently operating programs in these areas. Figure 12 presents the variations in the amount and percentage of state aid.

How the total amount of aid and the percentage of excess cost reimbursed by the state may vary depending upon the type of delivery system utilized by a local district is demonstrated in Figure 12. A basic concern raised earlier is of importance at this point; that is, what effect might this condition have upon the choice of programming at the local district level? For example, a district might place a student in a program with the decision dictated by fiscal concerns rather than the educational needs of the student. This possibility reinforces the need to continually conduct an in-depth analysis of the possible impact of funding policies.

Special Education Expenditures

Presently, widespread concern exists regarding expenditures for special education programs in Arizona. The question of ascertaining the costs of special education programs is a difficult one because various categories of costs

may be involved. The question may be what will programs cost?, what cost variations exist in programs?, what is the excess cost?, or any of a large number of other questions. To be meaningful, cost information must be collected and presented in some form of classification with the designed format being chosen based on the purpose of gathering the data. For example, if the intent of collecting data is to provide information on what programs will cost in the future, a format should be designed which will have predictive utility. Without this type of structure, cost information will be meaningless and provide little value for educational planners in the state.

Apprehension exists within the state over the tremendous rise in special education expenditures. The legislature and local educational agencies have commonly expressed concern over the rising cost of programs for exceptional children and the concomitant problem of raising the additional funds needed to support these programs. Legislation enacted to provide appropriate educational services for the handicapped seems to have created many new problems. Aaron Wildavsky aptly addressed a similar type of problem on a nationwide basis:

> Men have worked for twenty years to get massive education bills through Congress only to discover that the results have not lived up to their expectations; it takes a lot more to improve education for the deprived than anyone had thought. (Wildavsky, 1969, p. 200).

Special education legislation may become an empty process if implementation of the resultant programs creates insurmountable problems which prevent intended beneficial results from becoming a reality. The tremendous increase in special education expenditures is rapidly becoming such a problem, for one major complication in implementing special education programs on a state-wide basis is problems which are fiscal in nature.

Growth of Special Education Expenditures

Arizona has experienced an increase in expenditures for education at the state level. This increase has not been limited to special education; however, the increase of new programs in the area of special education has been rather extensive with resulting large increases in costs. State aid for special education increased by 25.83% between 1972-73 and 1973-74. For 1973-74 state aid for programs for the handicapped was in excess of five million dollars. Additional information can be gained by examining in detail the increase in special education expenditures (Table 6, page 45). On a categorical basis the percent of increase ranged from a low of 5.40% for Educable Mentally Handicapped and Emotionally Handicapped to a high of 148.39% for Specific Learning Disabilities. These funds were provided under a straight sum formula previously described on page 25.

TABLE 6

Apportionment of State Funds to Special Education
For 1972-73 and 1973-74

Source of Apportionment	1972-73	1973-74	Increase	% of Increase
Special Ed ($380) ARS-1017 (E. M. H. and E. H.	$2,279,049.62	$2,402,150.94	$ 123,101.32	5.40%
Special Ed ($590.00) ARS-1017 (M. H.)	12,764.06	18,462.27	5,698.21	44.64%
Homebound ($526) ARS-1017	223,466.86	237,891.40	14,424.54	6.45%
Gifted Pupils. ARS-1017	29,730.35	39,699.05	9,968.70	33.53%
Trainable Mentally Handicapped ARS-1017	752,832.09	835,314.72	100,482.63	13.35%
Speech Handicapped ARS-1017	376,675.00	428,025.00	51,350.00	13.63%
Specific Learning Disabilities	404,270.60	1,004,148.86	599,878.26	148.39%
Visual Handicapped ARS-1017	Funds not available	69,615.70	69,615.70	---
Hearing Handicapped	Funds not available	79,009.70	79,009.70	---
Total	$4,078,788.58	$5,132,317.64	$1,053,529.06	25.83%

* Source: Annual Report of the Superintendent of Public Instruction, Fiscal Year 1972-73 and Fiscal Year 1973-74.

If the increase for Specific Learning Disabilities is removed, the percentage increase is reduced from 25.83% to 11.12%. Removing Specific Learning Disabilities and the new grants for Visual Handicapped and Hearing Handicapped reduces the increase to 7.4%. A rather substantial increase is also evident in funds for the Multiple Handicapped. From this type of data, specific areas of cost increase are identified, and, with additional study, reasons for these

increases may be analyzed. For example, the reason for the substantial increase in Specific Learning Disabilities expenditures may be traced to current trends in the educational field to provide appropriate services in this area and/or lack of programs currently in operation.

For 1974-75 the state contribution of funds specifically designated for handicapped children increased to $16.2 million. The state has appropriated over $20 million for the excess cost of special education programs for 1975-76. Total expenditures, total excess cost, and state support for programs for the handicapped are presented in Figure 13.

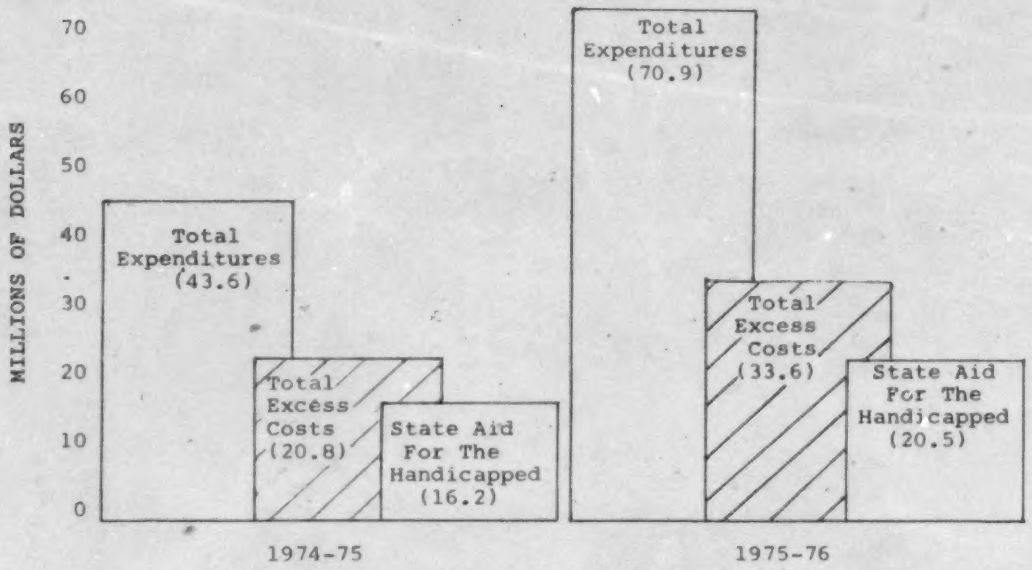

Fig. 13 Comparison of Total Excess Costs, Total Expenditures and State Aid Reimbursements for Handicapped Students 1974-75 and 1975-76*

* Source: Division of Special Education, Form ADE-RB-5, 1974-75 Worksheet for Computing Excess Costs, 7/1/75 District Entitlement Forms, 8/11/75.

From 1974-75 to 1975-76 the total expenditures for handicapped children is projected to increase by over 27 million dollars. The excess cost special education programs are projected to increase by almost 13 million dollars. Excess costs are those expenditures which are beyond those the school district would normally spend for the instruction of non-handicapped students. Figure 14 depicts the relationship between excess cost and total expenditures for handicapped students.

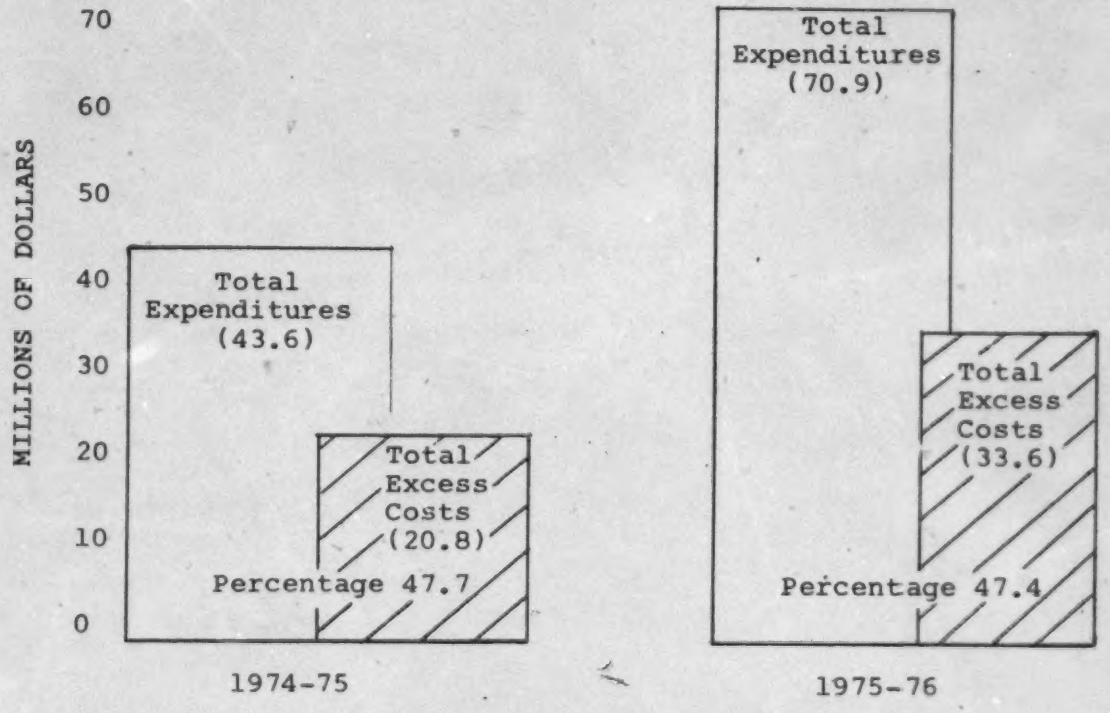

Fig. 14 Relationship of Excess Costs to Total Costs for Handicapped Student Program Expenditures*

* Division of Special Education, Form ADE-RB-5, 1974-75 Worksheets for Computing Excess Cost, 7/1/75, District Entitlement Forms, 8/11/75.

Expenditures for handicapped students which were not classified as excess cost increased by over 14 million dollars for 1975-76. However, the relationship between excess cost and total cost remained constant with excess costs accounting for approximately 47% of the total costs in 1974-75 and 1975-76.

Per Pupil Expenditures in Regular and Special Education

In examining the expenditures for educational programs for the handicapped, an important background consideration is the level of expenditures for regular education programs. The latter expenditures are important because computation of the amount of excess costs incorporates regular education expenditures, and the regular education costs become part of the total handicapped per pupil cost for students being served in resource programs. Resource programs are offered in addition to, rather than in lieu of, a regular program. The total cost for a handicapped student in this type of program is equal to the regular per pupil cost plus those extra costs needed to provide the specialized service. Table 7 (page 49) shows the average non-handicapped per pupil expenditures.

Handicapped per pupil expenditures for instruction are total expenditures for providing educational programs for special education students. This cost is not to be confused with excess costs which are only those expenditures that

exceed the level of fiscal support provided to all children in a school district. In resource programs the handicapped per pupil expenditure reflects the special education expenditures as well as the regular education expenditures. In self-contained programs, this amount is only the direct charges related to providing that special program.

TABLE 7

Average Non-Handicapped Per Pupil Expenditure For Instruction By District Size, 1974-75

DISTRICT SIZE FROM	TO	NUMBER OF DISTRICTS	PER PUPIL EXPENDITURES
0	100	13	$ 1,251.10
101	500	38	839.61
501	1,000	42	793.19
1,001	1,500	19	719.18
1,501	2,000	20	703.32
2,001	3,000	15	754.35
3,001	5,000	11	812.10
5,001	7,500	7	685.50
7,501	10,000	5	751.93
10,001	15,000	4	674.91
15,001	20,000	3	726.56
OVER	20,000	3	734.95

SOURCE: Form ADE-RB-5, 1974-75

Table 8 contains a listing of the average handicapped per pupil expenditures by district size for 1974-75.

TABLE 8

Average Handicapped Per Pupil Expenditure
For Instruction By District Size, 1974-75

DISTRICT SIZE FROM	TO	NUMBER OF DISTRICTS	PUPIL EXPENDITURES
0	100	13	$ 1,968.11
101	500	38	2,108.79
501	1,000	42	1,830.20
1,001	1,500	19	1,403.80
1,501	2,000	20	1,492.12
2,001	3,000	15	1,398.56
3,001	5,000	11	1,735.98
5,001	7,500	7	1,466.45
7,501	10,000	5	1,816.88
10,001	15,000	4	1,475.98
15,001	20,000	3	1,444.75
OVER	20,000	3	1,414.93

SOURCE: Form ADE-RB-5, 1974-75

The average per pupil expenditure for instruction for handicapped students varies from $1,398 to $2,108. The highest per pupil expenditures exist in districts with an ADM of less than 1,000 students.

Per pupil total excess instructional costs are shown in Table 9 (Page 52). They can be calculated by subtracting the expenditures for non-handicapped students (Table 7) from the average per pupil expenditure for handicapped students (Table 8). This procedure illustrates the fact that the total excess cost is at least partially dependent upon the excess costs for special education between districts and may in part reflect differences in expenditures for regular educational programs.

The per pupil excess costs range from $644 to $1,269. Since no information is available delineating the specific types of services provided by the expenditures listed in Table 9, it would be meaningless to speculate on the differences between respective education programs. Variations in cost may reflect inefficient delivery of services, differences in program offerings, types of student served, or other factors which affect the cost of providing educational services to children. It is difficult to analyze costs of programs unless information on the variables which are affecting these costs are known.

When examining variations in costs, the amount of state reimbursement should also be considered. Table 10 (page 53) represents the average percentage of total excess costs which are paid by the state handicapped aid.

TABLE 9

Average Total Excess Instructional Cost
Per Handicapped Pupil, By District Size
1974-75

DISTRICT SIZE FROM	TO	NUMBER OF DISTRICTS	PUPIL EXPENDITURES
0	100	13	$ 717.01
101	500	38	1,269.18
501	1,000	42	1,037.01
1,001	1,500	19	684.62
1,501	2,000	20	788.80
2,001	3,000	15	644.19
3,001	5,000	11	923.88
5,001	7,500	7	780.95
7,501	10,000	5	1,064.95
10,001	15,000	4	801.07
15,001	20,000	3	718.19
OVER	20,000	3	679.98

SOURCE: Form ADE-RB-5, 1974-75

The data shown in Table 10 indicate that the average percentage of total excess cost paid to local districts varied according to the ADM size of the district. The variation ranges from a low of 68.9% in districts serving between 101 and 500 students to a high of 90%, which was the maximum allowed by law in 1974-75. The maximum was paid to

the two largest district classifications: 15,001 to 20,000 and over 20,000. It may be that the large number of students within these districts permits greater flexibility in the development of special education programs.

TABLE 10

Average Percentage of Total State Excess Cost Paid in Relationship to District Size, 1974-75

DISTRICT SIZE FROM	TO	NUMBER OF DISTRICTS	AVERAGE % OF TOTAL EXCESS COST
0	100	13	84.31
101	500	38	68.90
501	1,000	42	75.24
1,001	1,500	19	84.60
1,501	2,000	20	77.68
2,001	3,000	15	89.30
3,001	5,000	11	80.24
5,001	7,500	7	72.43
7,501	10,000	5	79.32
10,001	15,000	4	86.05
15,001	20,000	3	90.00
OVER	20,000	3	90.00
TOTAL		180	78.04

SOURCE: Form ADE-RB-5, 1974-75

When considering the costs of educational programs for handicapped children, it is important to be aware of the fact that wide variations exist in per pupil cost. It long has been evident that certain types of severe handicaps necessitate large costs to provide educational services. Table 11 (page 55) provides a summary of the variations in projected costs for 1974-75. The highest per pupil costs in 1974-75 and 1975-76 were in excess of $5,400. It is interesting to note that the largest variation in per pupil costs, as reported in Tables 11 and 12 (page 56), exists in those districts with ADM of less than 5,000 students. Perhaps an explanation for the small deviation in the districts serving more than 10,000 students is that these districts have large enough special education populations to provide, efficiently, services for low prevalence categories of handicapped students even though these students traditionally have required high expenditures because of the intensity of services required. This size factor may explain the occurrence (See Table 10) of the rather high average handicapped per pupil cost in districts in the 7,501 to 10,000 category, for these districts may represent a transitional size in that their populations are large enough so that they are encountering low prevalence handicapped children but not in large enough numbers to provide efficient delivery of services.

TABLE 11

Variation in Per Pupil Expenditures for Special Education
By District Size, 1974-75

DISTRICT SIZE IN ADM		PER PUPIL EXPENDITURE		
FROM	TO	HIGHEST	MEDIAN	LOWEST
0	100	3,118.95	1,886.25	905.47
101	500	5,400.60	1,856.02	788.00
501	1,000	6,000.00	1,641.22	814.36
1,001	1,500	2,060.25	1,403.06	699.87
1,501	2,000	2,415.28	1,463.41	832.71
2,001	3,000	2,001.73	1,420.45	973.43
3,001	5,000	3,449.41	1,431.00	1,071.03
5,001	7,500	2,281.94	1,355.56	994.28
7,501	10,000	2,350.99	1,662.57	1,469.50
10,001	15,000	2,145.15	1,331.86	1,095.05
15,001	20,000	1,778.11	1,372.18	1,183.95
OVER	20,000	1,860.56	1,071.18	1,313.07
STATE SUMMARY		6,000.00	1,535.68	699.87

SOURCE: Form ADE-RB-5, 1974-75

TABLE 12

Variations in Per Pupil Expenditures for Special Education By District Size, 1975-76 (Projected)

DISTRICT SIZE IN ADM		Per Pupil Expenditure		
FROM	TO	Highest	Median	Lowest
0	100	5,461.86	2,268.70	1,193.25
101	500	4,000.00	1,847.30	736.88
501	1,000	3,054.37	1,593.56	986.33
1,001	1,500	2,179.00	1,506.00	1,062.94
1,501	2,000	2,382.00	1,480.19	1,079.64
2,001	3,000	1,935.00	1,610.26	1,135.98
3,001	5,000	2,227.38	1,447.23	993.00
5,001	7,500	1,957.69	1,382.08	1,089.88
7,501	10,000	1,772.59	1,468.85	970.91
10,001	15,000	2,095.17	1,674.29	1,452.72
15,001	20,000	2,287.61	1,718.31	1,430.00
OVER	20,000	1,875.00	1,539.45	1,492.19
STATE SUMMARY		5,461.86	1,656.04	736.88

Source: Division of Special Education, Worksheets for Computing Special Education Excess Cost, 7/1/75

Analysis of Special Education Expenditures

The information for this section was derived from a selected sample of thirty-eight school districts. These data were collected in an effort to determine the types of expenditure information which are presently available from local districts and the problems associated with the accumulation and analysis of this information. Since school districts already reported budget information to the county school office, it was determined that this would be the logical initial source of information. However, such a process creates certain restraints on the types of data which were available. These restraints include the fact that special education expenditures will not be reported on a categorical basis, and that expenditure components will be limited to those utilized by the local districts at the time of the study.

Expenditures are reported on both a per pupil and a per teacher basis. From this type of approach, additional consistency in expenditure components may be developed as per pupil expenditures are very sensitive to enrollment variations, and a per teacher expenditure assists in factoring out this variation. Instructional expenditures are reported in three major categories: (1) expenditures directly incurred in the provision of special education instruction; (2) expenditures for special education services directly supportive of special education programs; and (3) general

administrative expenses. These are expenses that could be charged to special education in 1972-73 and 1973-74. Figure 15 presents the expenditure categories and elements that were included in each.

ADMINISTRATION	INSTRUCTION	INSTRUCTION SUPPORT
Clerk and Employees of School Board	Classroom Teachers	Guidance and Psychological Personnel
Superintendent	Other Instructional Personnel	Librarians
Assistant Superintendent	Teaching Supplies	Secretarial and Clerical Assistants
Principals		Library Supplies
Assistant Principals		Travel
Other Administrative Officers		Other
Secretarial and Clerical Assistants		
School Board Expense		
Superintendent's Office Expense		
Principal's Office Expense		
Travel		
Supervisor of Instruction		

Fig. 15 Expenditure Categories*

*Categories were derived from Arizona Department of Education Budget Policies for 1973-74. Since special education expenditures were reported for only instructional service, other budget areas were excluded from this study. For a complete listing of expenditure components for special education, refer to page 12 of Special Education: Needs--Costs--Methods of Financing by William P. McLure.

The average daily attendance (ADA) of a program or system was used as the divisor when determining per pupil expenditures in this study. ADA was used because during the span of time for which information about expenditures was gathered, ADA was the procedure used to compute reimbursement on a state-wide basis. ADA was used to compute the per pupil expenditures in the various expenditure categories in regular and special education. The expenditure per classroom does not reflect the variations caused by individual enrollment changes, rather it presents the expenditure level per instructional class. Since many services in a school system seem to be delivered on a classroom rather than a per pupil basis, this type of information hopefully will be of use in the development of analysis techniques. For example, services such as administration seem to be provided to teachers rather than students, and this expenditure information will allow for comparisons to be made on a teacher unit basis.

Expenditures will be presented with three types of comparisons. First, the expenditures for special education will be compared to expenditures for regular education on a per pupil basis. Secondly, expenditures will be compared on a per classroom basis, and finally, expenditures will be compared on an index basis of special education to regular education costs. These comparisons will be completed for

administration, instructional, and instructional support categories.

Of the thirty-eight districts that were included in the study, twenty-eight were elementary districts and ten high school districts. At the high school level the total ADA of the districts in the study was 48,274 and these districts employed 2,318 teachers. At the elementary level the total ADA of the districts was 172,304 and these districts employed 7,531 teachers. The average teacher ratio was 20.23 to 1 at the high school level and 22.57 to 1 at the elementary level. At the elementary level the districts studied served 4,823 special education students and employed 470 teachers. At the high school level the districts studied served 922 pupils and employed 94 teachers. The average special education pupil-teacher ratio at the elementary level was 10.26 to 1, and, at the high school level, it was 9.80 to 1.

Total Instructional Expenditures

Average expenditure was computed for both regular and special education. This procedure was completed at both the elementary and high school level. Table 13 (page 61) is a summary of the results. An anlysis was also done to determine the correlation between class size and expenditures per pupil.

The strong negative correlations at both the elementary and secondary levels are important findings. They

demonstrate that much of the variation in per pupil expenditures at the elementary level and high school level can be attributed to class size. These findings reinforce those of a recently completed study in Illinois (McClure 1975). In this study Dr. McLure determined that when cost differentials are examined across programs, the factor which is rather constant is the average number of pupils per certified teacher.

TABLE 13

Class Size and Per Pupil Expenditures
For Special and Regular Education For
Elementary and Secondary Programs

Program Level	Expenditures		Correlation Between Class Size and Expenditures
	Average Class Size	Average Per Pupil	
Elementary			
Regular Education	22.57	$1,054.28	-.30
Special Education	10.26	$1,426.40	-.80
Secondary			
Regular Education	20.23	$1,081.71	-.12
Special Education	9.80	$1,561.10	-.69

Administrative Expenditures

An important issue to examine is the relation of various expenditure components to the total expenditure per pupil. For example, the mean per pupil expenditure for administration and supervision at the high school level was $94.29 per pupil for regular education and $103.33 per pupil for special education. This expenditure component was

8.72% of the total operating expenditure for regular education and 7.24% for special education. Table 14 presents a summary of the relationship betweeen expenditures for administration and supervision and total operating expenditures for regular and special education.

TABLE 14

Relationship of Administration and Supervision Expenditures To Total Operating Expenditures For Elementary and Secondary Programs

Program Level	EXPENDITURES		
	Average Total Operating	Average For Administration and Supervision	Percent Administration and Supervision are of Total Operating
Elementary			
Regular Education	791.52	74.26	9.36
Special Education	1,426.65	112.70	7.90
Secondary			
Regular Education	1,081.71	103.33	8.72
Special Education	1,561.10	94.29	6.04

The percentage of total expenditures for administration and supervision was less for special education at both levels. Central office expenditures of the school district were prorated into regular and special education on a per teacher basis. The figures may be somewhat misleading, for it is exceedingly difficult to determine the time responsibility of principals and regular education supervisors for special programs. Table 15 (page 63) presents the relationship of direct instructional salaries to total operating expenditures. A slight variation in the average salary for

TABLE 15

Relationship of Direct Instructional Salaries
To Total Operating Expenditures For
Elementary and Secondary Programs

Program Level	EXPENDITURES			Average Salary for Instruction
	Average Total Operating	Average Per Pupil For Instructional Salaries	Percent Instructional Salaries are of Total Operating	
Elementary				
Regular Education	791.52	474.41	59.94	10,145.44
Special Education	1,426.65	966.08	67.72	10,266.08
Secondary				
Regular Education	1,081.71	566.93	52.41	11,034.49
Special Education	1,561.10	1,013.58	64.93	10,385.63

special and regular education teachers was evident at the secondary level.

The expenditure per pupil for instructional salaries was approximately double for special education. This finding is consistent with the lower pupil teacher ratios for special education. In fact, if an index is established for the relationship between classroom size and expenditure per pupil, the index for classroom size at the elementary level would be 2.20 and the index for per pupil expenditures would be 2.04. At the secondary level, the index for classroom size would be 2.06 compared with 1.79 index for per pupil expenditure.

A factor affecting the index variation at the secondary level is the variation in the average salary for regular and special education teachers. Thus, if the salary is held constant, variation in per pupil expenditure for instruction is attributable to class size at both the elementary and secondary level.

Teaching Supplies

The next area to be analyzed is expenditures for teaching supplies which were also examined on a per pupil and per teacher basis and summarized in Table 16 (page 65). This table examines the relationship of expenditures for teaching supplies to total operating expenditures.

TABLE 16

Relationship of Expenditures for Teaching Supplies
To Total Operating Expenditures For
Elementary and Secondary Programs

Program Level	EXPENDITURES		
	Average Total Operating	Average Per Pupil and Per Teacher Expenditures	Percent Teaching Supplies are of Total Operating
Elementary			
Regular Education			
Per Pupil	791.52	18.15	2.29
Per Teacher	17,449.82	400.43	
Special Education			
Per Pupil	1,426.40	33.43	2.34
Per Teacher	16,111.89	374.41	
High School			
Regular Education			
Per Pupil	1,081.71	32.97	3.05
Per Teacher	21,862.99	670.37	
Special Education			
Per Pupil	1,561.10	34.97	2.24
Per Teacher	17,258.86	400.49	

The expenditures for instructional supplies at the elementary level were $18.15 per pupil in regular education and $33.43 per pupil in special education. On a per teacher basis the expenditures were approximately equal for regular and special education. The percentage of total operating expenditures for instructional supplies was also very close at the elementary level. At the secondary level, expenditures for industrial supplies were $32.97 for regular education and $34.97 for special education. It is of interest to

note that the expenditures per pupil in regular education differ substantially between the elementary and high school level, whereas the expenditures per pupil in special education are almost identical at both levels. Also, the expenditures per teacher in special education at the elementary and high school levels were quite similar.

Guidance and Psychological Personnel

A major portion of the instructional support expenditures is the salaries of guidance and psychological personnel. These expenditures were reported as a common budget item on district forms and are reported in aggregate for this study. Table 17 (page 67) presents the relationship of these expenditures to total operating expenditures for regular and special education. The data are summarized so that comparisons can be made on both a per pupil and per teacher basis.

Expenditures for guidance and psychological services were higher on a per pupil and per teacher basis for special education. At the elementary level this expenditure component was 112.33 per pupil and accounted for over 7% of the total expenditures. At the secondary level, salaries for guidance and psychological services accounted for more than 10% of the total operating costs and averaged 164.36 per pupil.

TABLE 17

Relationship of Salaries for Guidance and Psychological Personnel
To Total Operating Expenditures For
Elementary and Secondary Programs

Program Level	EXPENDITURES		
	Average Total Operating	Average Per Pupil and Per Teacher Expenditures	Percent Guidance and Psychological Personnel are of Total Operating
Elementary			
Regular Education			
Per Pupil	791.52	7.46	0.94
Per Teacher	17,449.82	158.99	
Special Education			
Per Pupil	1,426.40	112.33	7.88
Per Teacher	16,111.89	1,226.01	
High School			
Regular Education			
Per Pupil	1,081.71	37.38	3.46
Per Teacher	21,862.99	762.11	
Special Education			
Per Pupil	1,561.10	164.36	10.53
Per Teacher	17,258.86	1,782.16	

Salaries for instructional staff and guidance and psychological services were 75.6% of the total operating expenditure for special education at the elementary level. These expenditure components comprised 75.13% of the total operating expenditure at the secondary level. An important caution should be stated in connection with this study. Only the direct expenditures of special programs and prorated general operating expenditures were included in expenditure components. The amount of input that handicapped children who are in resource type programs receive from regular education was not analyzed.

CHAPTER IV

A FORMAT FOR THE DETERMINATION OF AN APPROPRIATE FUNDING METHOD

As a result of the foregoing presentation, the development of a funding method for special education programs does not seem to be a straightforward matter. What does seem apparent is that the development of a funding method must be deliberate, if desired results are to be realized.

In order to design funding procedures for special education, the major issues involved in these programs must be set in a broader perspective. That is, the issue of special education finance must be placed in a context which, although not denying its reality, does reestablish financing in a different order of priority. As was alluded to earlier in this report, the finance issue generally has been and is the most visible and debatable aspect of state-wide special education programs. What is often forgotten, however, in the discussions of funding special education is the desired results of these expenditures. Namely, what are the goals of a state-wide education program?

Under careful examination specific funding formulae (the formats used to calculate and allocate fiscal resources) are seen to be premised upon more general educational purposes. Unfortunately, oftentimes the purposes are either

unstated or stated in such an ambiguous manner that they are of little use. If a funding method premised upon educational purposes is to be developed, it is imperative that these purposes be clearly presented in a form that can readily result in desired activity.

Discussion about purposes in education is not new; the history of education is replete with arguments advocating numerous and vastly different educational aims. In fact, the recurrence of this issue may be indicative of its fundamental importance. Recently, attention has been focused upon defining specific educational purposes for the exceptional or special student. Persons constructing such purposes generally agree that the purposes for these students are quite similar to those of regular students, and the differences that must be accounted for occur most frequently at a procedural or delivery level. It is this level which necessitates additional financial support. The point being made is that, because the programs are identified as different, the specific purposes for the special educational activity must be clearly stated; and this clarification must be made prior to the development of a funding method.

With clearly stated purposes for special education, particular objectives for funding can be identified. The funding objectives, in turn, serve as criteria for subsequent articulation in the development of a funding method. To illustrate, let us assume that the agreed upon objective

for providing state monies for special education is to promote local school districts' efforts in spending local revenue, in addition to improving the programs for the special students. Therefore, the state would want to reward those districts which are spending their own monies. The form of reward would be added state funds, supposedly enhancing such programs even more. The problem now is, What funding method would be most effective in bringing about the stated purpose? Simply, it appears that a graduated excess cost funding formula would be an appropriate choice. In order to make the best judgment, however, the advice of funding experts should be sought. Even more precisely, assuming the choice of the excess cost method is made, those possessing expert knowledge about excess cost funding should aid in the articulation and eventual implementation of the method. (It should be noted that an alteration in the original "agreed-upon objective" will result in an alteration in the design of the specific funding method.)

In consideration of what has been presented, it is a suggestion of this report that the following sequence be used to enhance the possibility of developing a funding method appropriate to the purposes for special education with the State:

1. Identification of general educational purposes;
2. development of an appropriate funding method; and finally

3. articulation of specific procedures attending the developed funding method.

The sequence and an example are presented in Figure 16 (page 73).

It should be noted that the sequential format presented in Figure 16 assumes no inherent programmatic purposes, but rather, merely supplies a framework by which educational purposes can be accomplished. The values underlying construction of the sequence and its subsequent implementation are a desire for deliberateness in action, consistency in program development, and shared community activity.

Purposes that may be used in the development of a funding method for special education may be quite diverse, since they are actually a reflection of a community's shared values. For example, one community may desire to spend the least possible amount needed to sustain minimum special education programs, whereas another community may want to initiate the best possible programs irrespective of the fiscal resources required. What is demanded in accordance with a democratic way of life is that the responsibility for stating the purposes remain, either directly or through delegation, with all those persons who are to be affected by the decision. The stated purposes serve as criteria in the development of a funding method. The following three purposes may illustrate this point.

GENERAL CONSIDERATIONS	FORMAT			EXAMPLE
	Objective	Activity	Evaluation	
PURPOSES OF EDUCATION	Identification of goals for education in general.	Those concerned participate by democratic means to adopt goals for providing educational programs.	The existence of a statement of goals for education in general.	"Student should be able to give their community financial, personal, and social support by understanding the value of the community and the way to contribute to it."*
	Identification of goals for special education.	Those concerned, with the aid of persons possessing expert knowledge in the area of special education, derive from the goals for education in general, goals for special education programs.	The existence of a statement of goals for special education.	The exceptional or special student "should be able to give their community financial, personal, and social support by understanding the value of the community and the way to contribute to it."
	Identification of goals for funding special education.	Those concerned, with the aid of persons possessing expert knowledge in special education finance, participate to establish the funding goals.	The existence of a statement of goals for funding special education.	To provide equitable and uniform fiscal support so that school districts may adjust environmental factors, modify school curriculum, and adapt teaching methods, materials and techniques for exceptional students.
ALTERNATIVE METHODS FOR FUNDING SPECIAL EDUCATION	Specification of objectives for funding special education.	State officials from the Department of Education determine specific objectives for funding special education.	The existence of a statement of funding objectives for special education.	a) Clearly identify expenditures of State monies for specific educational programs. b) Provide incentive for local expenditures on programs by assuming additional costs.
	Comparative analysis of alternative funding methods.	Critical examination by funding experts into viable alternative funding methods.	The existence of a critical report analyzing viable funding methods available to satisfy stated objectives.	To compile information on alternative funding methods; i.e., unit support percentage, excess cost, etc.
	Selection of particular funding method.	Selection of particular funding method by state special education officials with the aid of funding experts, based upon criteria derived from the stated goals for funding special education.	Adoption of general funding method taken from competing alternative methods.	a) Unit support. b) Excess cost.
SPECIFIC PROCEDURES OF FUNDING METHOD	Development of particular funding method.	Funding experts plan for the development of particular funding method.	A plan for the particular funding method is developed.	a) Since funds are to be directly tied to specific programs, ratios must be established which will be reimbursed. b) Since funds are to be delivered on a non-categorical basis, "excess cost" allows a district flexibility in programming to the particular needs of individual students.
	Design of funding formula.	Experts in funding methods design specific formulae.	Existence of funding formulae.	(Specific formulae).
	Articulation of specific funding procedures.	Experts in funding methods articulate specific funding procedures.	Efficient implementation of the selected funding method.	(Specific formulae).

*Colleen Decker, "Community Values and Professional Educational Purposes: Generic Format, Procedures, and Goals," in Proceedings of the 24th Far Western Philosophy Of Education Society, Tempe: Arizona State University Press, 1976.

Fig. 16 Format For The Determination Of An Appropriate Funding Method**

**This format is based upon the work of Drs. T. Frank Saunders and Roy F. Blake, The University of Arizona, and Dr. Colleen Decker, Pima Community College.

A funding method should be able to

1) make uniform in an equitable manner to local school districts the funds designated to bring about the desired educational programs,

2) provide specific services necessary for the students, based upon the recognized needs of students, and

3) clearly identify funds for control at a particular level in order to alleviate such procedural problems as distortions resulting from approximation and financial incentive for inappropriate student placement.

Once funding purposes have been agreed upon, a funding method may be developed in accordance with them. To aid in this development, an examination of various funding methods should be made. In a report for the U. S. Office of Education, the Management Analysis Center presented what it considered to be the methods currently in operation. These methods are presented in Figure 17 (page 75).

After the funding method has been selected from among the alternatives, the specific procedural details needed for efficient implementation must be refined. At this point, specific forms and reporting techniques are to be agreed upon. These considerations should be confronted by those most directly involved in the operation of the funding method.

If deliberate action is sought, a plan must necessarily be present; the sequence that has been suggested is such

Alternative Funding Method	Description of Method	Criticism of Method	Some States Employing Method
Unit	Determination of fixed sums to be reimbursed to the local districts for such expenses as personnel, administration, and transportation.	The cost of education is not uniform within a state; thus equal unit reimbursement does not correspond to equal expenditures.	Alabama Ohio
Weight	Reimbursement is made according to specific categories of special education; the amount of reimbursement is determined by a designated ratio based upon an arbitrary standard, regular child.	The cost of educating a regular child is difficult to determine, and thus the problems inherent in funding regular programs are passed on to funding special education.	Florida New Mexico
Percentage	The State supplies support for a percentage of the costs for programs maintained by the local districts.	Incentive for local district expenditures ultimately favoring wealthier districts.	Michigan Wisconsin
Personnel	Strictly a support arrangement; the State assumes the cost incurred by local districts in the hiring of certified staff for special programs.	There may be a tendency for local districts to over-hire at the expense of the State and programs which require large expenditures for equipment may not be offered.	Illinois
Straight Sum	Amount of reimbursement is fixed (categorically) by the State, and then local districts are reimbursed.	Payment is made per child, therefore there may be a tendency at the local level to keep class size near maximum.	Arizona (1971-72)
Excess Cost	Reimbursement is made by the State for costs of educating a special child above the costs incurred for educating a regular child.	May imply that the expenditures for special education are frivolous or unnecessary and a problem exists in determining accurately those expenditures which should be classified as excess cost.	Pennsylvania Tennessee

Fig. 17 Funding Methods

a plan for developing a funding method. In preparing this report, it has become apparent that an appropriate funding method which serves to accomplish desired educational programs must follow, and not precede, more general educational planning.

APPENDIX A

FORMS AND PROCEDURES FOR THE ANALYSIS OF STATE SPECIAL EDUCATION REIMBURSEMENT PATTERNS

APPENDIX A

FORMS AND PROCEDURES FOR THE ANALYSIS OF
STATE SPECIAL EDUCATION REIMBURSEMENT PATTERNS

SPECIAL EDUCATION PHASE I

Purpose: The purpose of this effort is to capture relevant data submitted to the state by each school district and perform a preliminary analysis of the data.

Specifications:

I. Data Entry and Retention. The attached sheet titled Reimbursement Pattern I/P and Record Format designates both the input format and the card image record that will be used to retain the data either on magnetic tape or cards. All data will be rounded to two decimal places using standard rounding procedures prior to input. Only two decimal places will be retained on the files.

The school year will be entered as a constant in positions 74-77 to facilitate multiple year comparison of data at a later date. The record type is a constant "1".

II. Reporting:

A. Relationship of Speech Enrollment to Percent of State Reimbursement.

1. Print Format--See attached layout sheet.

2. Columnar Description.

a. Percentage Range--The percentage is computed by dividing Speech ADM (I7) by Regular ADM (I3). Records should then be grouped by percentage range.

b. Percentage of reimbursement--This amount is computed by the following process.

(1) Cost of Special Education =

Handicapped Per Pupil Cost (I9)

X Special Education ADM (I4)

(2) % of reimbursement =

$$\frac{\text{State Reimbursement (I11)}}{\text{Cost of Special Education}}$$

In terms of a formula of item numbers:

$$\% \text{ of reimbursement} = \frac{(I11)}{(I9) \times (I4)}$$

c. Mean--This amount is the mean of the percentages of reimbursement for all districts in the respective percentage range.

d. Median--This amount is the median of the percentages of reimbursement for all districts in the respective percentage range.

e. Range--These amounts are the lowest and highest values of percentages of reimbursement for each respective percentage range in the left-most column.

f. School Year--Pick up out of any data card in item I13.

g. Report Date--Current date from internal operating system.

B. Relationship of Resource Enrollment to Amount of State Reimbursement.

1. Print Format--See attached layout sheet.

2. Columnar Description.

a. Percentage of Resource Administration to Specialized ADM less Speech ADM. The percentage is computed by dividing Resource ADM (I5) by the result of subtracting Speech ADM (I7) from Special Ed. ADM (TOTAL) (I4). The formula by item number is:

$$\frac{(I5)}{(I4)-(I7)}$$

Records should then be grouped by percentages ranges coinciding with the nine categories on the report.

b. Dollar Share Per Pupil--This amount is computed by dividing State Reimbursement (I11) by Special Ed. ADM (TOTAL) (I4).

$$\frac{(I11)}{(I4)}$$

The result should not exceed 999.99.

c. Mean--This amount is the mean of the Dollar share Per Pupil values for all districts in the respective percentage range in the first column.

d. Median--This amount is the median amount of the Dollar Share Per Pupil values computed for all districts in the respective percentage range in the first column.

e. Range--These amounts are the lowest and highest values of Dollar Share Per Pupil for the districts falling into the respective range in the first column.

f. Dates are the same other reports.

C. Reimbursement Pattern.

1. Print Format--See attached layout sheet.

2. Columnar Description.

a. Enrollment Ranges--All districts must be placed into one of the 12 enrollment ranges.

b. Overall--All districts amounts are considered in computations for this column.

c. Category--The first categories represent data items I3 through I11. Percent of State Reimbursement =

$$\frac{I11}{I9 \quad X \quad I4}$$

And State Share Per Pupil =

$$\frac{I11}{I4}$$

d. Mean--This amount is the mean of all district entries, by enrollment range, for each of the categories defined above.

e. Median--This amount is the median of the amounts for all districts, by enrollment range, for each of the categories defined above.

f. From--To--The amounts are the low and high values, by enrollment range, for each of the categories defined above.

g. Note that there is a different print format for the State Reimbursement Category amounts. This is necessitated by the large number of digits to be displayed for this category only.

h. School Year is picked up from item I13.

i. Report Date is the current date available from the operating system.

III. General Comments:

A. County Code, District Code, and District Type should be coded on the input sheets prior to typing them in.

B. SOS on the DEC-10 is recommended for data entry, keeping in mind that the record is 80 characters, the SET TTY 80 command will be required prior to entry of the data.

C. Programs should be written in a general nature, not using commands restrictive to the 60 bit word on the CDC-6400. Fortran Extended is acceptable as those same features are available on the Honeywell 6000 series that may eventually be used for these programs.

D. Output will be desired both on white paper and the normal lined computer paper, so this option should be provided.

REIMBURSEMENT PATTERN I/P AND RECORD FORMAT

RECORD DESCRIPTION					
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
1.	County Code	1	2	2	0	2 digit code required
2.	District Code	3	4	2	0	2 digit code required
3.	Regular ADM	5	12	8	2	Round to 2nd decimal Punch decimal point If zero, or blank enter 0.00
4.	Special Ed. ADM (TOTAL)	13	19	7	2	Do not enter commas
5.	Resource ADM	20	26	7	2	
6.	Self Contained ADM	27	33	7	2	SAME FOR
7.	Speech ADM	34	40	7	2	ITEMS 4 THROUGH 11
8.	Non Handicapped Per Pupil Cost for instruction	41	47	7	2	
9.	Handicapped Per Pupil Cost	48	54	7	2	
10.	Excess Cost Per Handicapped Pupil	55	61	7	2	
11.	State Reimbursement	62	71	10	2	
12.	District Type	72	73	2	0	2 digit code required
13.	School Year	74	75	2	0	Enter last two digits last year; year, i.e. 1973-74 = "74".
		76	79	4		Blank
14.	Record Type	80	80	1	0	Constant "1"

APPENDIX B

FORMS AND PROCEDURES FOR THE ANALYSIS OF SPECIAL EDUCATION EXPENDITURES

APPENDIX B

FORMS AND PROCEDURES FOR THE ANALYSIS OF SPECIAL EDUCATION EXPENDITURES

SPECIAL EDUCATION PHASE II
(Special and Regular Education Costs)

Purpose: The purpose of this effort is to capture relevant personnel and cost data as submitted by each school district, develop a file format to retain the data, and perform simple cost per pupil, cost per teacher, and index of Special Education to Regular Education computations.

Specifications:

I. Data Entry and Retention. Due to the large number of positions required to store all of the data, the input has been broken down into four, 80 column card formats. This has been done for two purposes: One, to allow flexibility in submitting input; and Two, to provide a standard basis to transmit the file to another computer should the system be operated by the State Department of Data Processing. The four card formats are clearly identified and run sequentially through the input

form. Each card has a unique Record Type that does not duplicate the record type used in Phase I of this project.

Except where noted, all input is expressed as a fraction such as 1/20th which must be converted to a decimal equivalent of .05 for entry. Where the decimal equivalent is greater than two digits, standard rounding procedures will apply to the third decimal position to arrive at two digits. Due to the volume of data, the decimal points will not be entered. This necessitates the accurate placement of all data in each field. The last two digits of the last year (i.e., 73-74 = 74) will represent school year.

Edits must be employed to insure the presence of county and district codes, school year, and record type. Print the card image of all input cards failing this edit.

The master file record will be 336 positions in length including 20 blank positions for file expansion. Input cards must be sorted in County, District, School Year, and Record Type order. When building the record for a specific district and year, check to insure that all record types are present. If not, print "Record Type n missing for

District nn and Year nn " for all missing records and do not write out a record for that District and Year.

The Master File should carry standard labels and be blocked five records to a block for processing efficiency and control. A record count should be maintained and printed at the end of the report for control purposes.

II. Tables. A District Name Table is required to print the name of the district in addition to the county/district code number on reports. See the format for the District Name Tables for both the input card format and the table format. This table must be updateable so it is suggested that it be maintained manually and read in with the program at this time. If additional use warrants, the table will be made into a "permanent file" and a single copy maintained through a formal updating process.

III. Item numbers to be computed:

A. The following input item numbers will contain the aggregate amount to be redistributed. Redistribute the total amount input by dividing the total by the following formula: (Numbers I n are item numbers).

$$R1 = \frac{I23}{I23 + I24}$$

$$S1 = \frac{I24}{I23 + I24}$$

Regular (In) = In X R1 Note: Replace Item n w/result.

Special Ed. (In + 1) = In X S1

ITEM n NUMBERS are: 30, 52, 54, 56, 58, 60.

B. Total Operating amounts I60 & I61 will be input and stored as raw data, but report totals will be a summary of the respective columns. Cost per pupil and per teacher will then be computed on the accumulated amount.

C. Index numbers will be computed only for lines containing cost per pupil and cost per teacher. INDEX--(Special Ed./Regular Ed.) cost per pupil and cost per teacher amounts.

D. Cost per pupil = Total Amount for a component (Regular or Special Ed.) divided by ADA Regular (I23) or ADA Special Ed. (I24).

E. Cost per teacher = Total Amount for a component (Regular or Special Ed.) divided by Regular Ed. Teachers (I21) or Special Ed. Teachers (I22).

F. The following components will not have per pupil and per teacher computations.

1. Operation of plant.
2. Maintenance of school plant.
3. Auxiliary Agencies.
4. Fixed Charges.

G. The following input item numbers will have the sum of Regular and Special Education in the Regular field. Subtract the Special Education amount from the amount in the Regular field and replace the Regular field with the result. This should be done at input time and the resulting detail figures stored on the data file. Item numbers are: 32, 34, 36, 38, 40, 42, 44, 46, 48, and 50.

IV. Reporting. Only one report is currently required. Computation of the fields is described in Section III. Additional comments are:

A. Subtract one from school year (I13) to arrive at first part of the number to be printed next to the "School Year" heading.

B. Print the run date in the upper right hand corner.

C. Report is set up to run final copies on 8½x11 white forms so provisions for special forms are required.

D. Next to the heading "District", print the district code, then print the full 35 character district title from the District Name Table. If no title is found, (i.e., no match on the table search), print "*****TITLE NOT IN TABLE*****" in the title space of the report.

E. Next to the heading "County", print the county code, then the 10-character county title. This county table should become part of the program since titles do not change.

F. Single Space, Operation of Plant through Fixed Charges to conserve lines to enable the report to fit a single page. Also ignore blank lines 4, 10, and 14 on the printer spacing chart. Total line count is 63.

SPECIAL EDUCATION PHASE II

Card 1 Format

RECORD DESCRIPTION						
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
1.	County Code	1	2	2	0	Required
2.	District Code	3	4	2	0	Required
13.	School Year	5	6	2	0	Last 2 digits of last year, i.e., 73-74 = "74"
14.	Record Type	7	7	1	0	Constant "2"
21.	Regular Ed. Teachers	8	13	6	2	Convert fraction to decimal
22.	Special Ed. Teachers	14	18	5	2	Convert fraction to decimal
23.	ADA Regular	19	26	8	3	
24.	ADA Special Education	27	33	7	3	
25.	Supervisors	34	37	4	2	
26.	Guidance & Psychology Personnel	38	41	4	2	
27.	Other Instr. Personnel	42	45	4	2	
28.	Librarians	46	49	4	2	
29.	Secretarial & Clerical	50	53	4	2	
30.	Administration Regular	54	62	9	2	
32.	Supervisors-Regular	63	70	8	2	
33.	Supervisors-Spec. Ed.	71	77	7	2	

SPECIAL EDUCATION PHASE II

Card 2 Format

RECORD DESCRIPTION					
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
1.	County Code	1	2	2	0	Required
2.	District Code	3	4	2	0	Required
13.	School Year	5	6	2	0	Last 2 digits of last year, i.e., 73-74 = "74"
14.	Record Type	7	7	1	0	Constant "3"
34.	Guidance and Psychology Personnel Regular	8	16	9	2	
35.	Guidance and Psychology Personnel Spec. Ed.	17	24	8	2	
36.	Classroom Teachers, Regular	25	34	10	2	
37.	Classroom Teachers, Spec. Ed.	35	43	9	2	
38.	Other Instr. Personnel, Regular	44	52	9	2	
39.	Other Instr. Personnel, Spec. Ed.	53	59	7	2	
40.	Librarians, Regular	60	67	8	2	
41.	Librarians, Spec. Ed.	68	74	7	2	

SPECIAL EDUCATION PHASE II

Card 3 Format

RECORD DESCRIPTION						
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
1.	County Code	1	2	2	0	Required
2.	District Code	3	4	2	0	Required
13.	School Year	5	6	2	0	Last 2 digits of last year, i.e., 73-74 = "74".
14.	Record Type	7	7	1	0	Constant "4".
42.	Secretarial & Clerical Regular	8	16	9	2	
43.	Secretarial & Clerical Spec. Ed.	17	23	7	2	
44.	Teaching Supplies Regular	24	31	8	2	
45.	Teaching Supplies Spec. Ed.	32	38	7	2	
46.	Library Books, Regular	39	46	8	2	
47.	Library Books, Spec. Ed.	47	53	7	2	
48.	Travel, Regular	54	60	7	2	
49.	Travel, Spec. Ed.	61	67	7	2	
50.	Other, Regular	68	75	8	2	

SPECIAL EDUCATION PHASE II

Card 4 Format

RECORD DESCRIPTION						
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
1.	County Code	1	2	2	0	Required
2.	District Code	3	4	2	0	Required
13.	School Year	5	6	2	0	Last 2 digits of last year, i.e., 73-74 = "74"
14.	Record Type	7	7	1	0	Constant "5"
51.	Other, Spec. Education	8	14	7	2	
52.	Operation of Plant	15	23	9	2	
54.	Maintenance of school plant	24	32	9	2	
56.	Auxiliary Agencies	33	41	9	2	
58.	Fixed Charges	42	50	9	2	
60.	Total Operating Costs	51	60	10	2	

SPECIAL EDUCATION PHASE II

DISTRICT NAME TABLE FORMAT

RECORD DESCRIPTION					
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
1.	County Code	1	2	2	0	County in which district resides.
2.	District Code	3	4	2	0	Unique number for each district in each county.
14.	Record Type	5	5	1	0	Constant Zero
62.	County Description	6	40	35	0	Left justified title of the school district.

SPECIAL EDUCATION PHASE II

SPECIAL AND REGULAR EDUCATION COSTS

Master File Format

RECORD DESCRIPTION					
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
1.	County Code	1	2	2	0	
2.	District Code	3	4	2	0	
13.	School Year	5	8	4	0	Last 2 digits of last year, i.e., 1973-74 = "74"
14.	Record Type	9	9	1	0	Constant "6"
21.	Regular Ed. Teachers	10	15	6	2	
22.	Special Ed. Teachers	16	20	5	2	
23.	ADA Regular	21	28	8	3	
24.	ADA Special Education	29	35	7	3	
25.	Supervisors	36	39	4	2	
26.	Guidance and Psychology	40	43	4	2	
27.	Other Instr. Personnel	44	47	4	2	
28.	Librarians	48	51	4	2	
29	Secretarial & Clerical	52	55	4	2	
30.	Administration, Reg.	56	64	9	2	
31.	Administration, Sp. Ed.	65	72	8	2	Not I/P
32.	Supervisor, Regular	73	80	8	2	
33.	Supervisors, Spec. Ed.	81	87	7	2	

(Continued)

SPECIAL AND REGULAR EDUCATION COSTS

Master File Format

RECORD DESCRIPTION					
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
34.	Guidance and Psychology Regular	88	96	9	2	
35.	Guidance and Psychology Spec. Ed.	97	104	8	2	
36.	Classroom Teachers, Regular	105	114	10	2	
37.	Classroom Teachers, Spec. Ed.	115	123	9	2	
38.	Other Instr. Personnel Regular	124	132	9	2	
39.	Other Instr. Personnel, Spec. Ed.	133	139	7	2	
40.	Librarians, Regular	140	147	8	2	
41.	Librarians, Spec. Ed.	148	154	7	2	
42.	Secretarial & Clerical Regular	155	163	9	2	
43.	Secretarial & Clerical Spec. Ed.	164	170	7	2	
44.	Teaching Supplies, Regular	171	178	8	2	(Continued)

SPECIAL AND REGULAR EDUCATION COSTS

Master File Format

RECORD DESCRIPTION					
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
45.	Teaching Supplies, Spec. Ed	179	189	7	2	
46.	Library Books, Regular	186	193	8	2	
47.	Library Books, Spec. Ed.	194	200	7	2	
48.	Travel, Regular	201	207	7	2	
49.	Travel, Spec. Ed.	208	214	7	2	
50.	Other, Reg.	215	222	8	2	
51.	Other, Spec. Education	223	229	7	2	
52.	Operation of plant, Reg.	230	238	9	2	
53.	Operation of plant, Spec. Education	239	246	8	2	Not I/P
54.	Maintenance of school plant, Reg.	247	255	9	2	
55.	Maintenance of school plant, Spec. Education	256	263	8	2	Not I/P
56.	Auxiliary Agencies, Regular	264	272	9	2	(Continued)

SPECIAL AND REGULAR EDUCATION COSTS

Master File Format

RECORD DESCRIPTION					
Item No.	Field Name	Positions From	Positions To	Number	Decimals	Comments
57.	Auxiliary Agencies, Spec. Ed.	273	280	8	2	Not I/P
58.	Fixed Charges Regular	281	289	9	2	
59.	Fixed Charges Spec. Ed.	290	297	8	2	Not I/P
60.	Total Operating Exp. Regular	298	307	10	2	
61.	Total Operating Exp. Spec. Ed.	308	316	9	2	Not I/P
						Total of 316
	Blank	317	336	20	0	Blank filler for expansion.

APPENDIX C

STATE REGULATIONS RELATING TO SPECIAL EDUCATION BUDGETING FOR 1974-75

APPENDIX C

STATE REGULATIONS RELATING TO SPECIAL EDUCATION BUDGETING FOR 1974-75

The Superintendent of Public Instruction shall require each district which provided special education programs in the current year to furnish the Superintendent with records detailing for special education programs.

In accordance with ARS 15-1017, the Superintendent of Public Instruction shall review all requests for state monies for special education from each district. If the Superintendent of Public Instruction determines that the requests for state monies are consistent with program levels offered by the school district in the current year plus an allowance for reasonable growth, he shall furnish the treasurer and the school superintendent of each county an abstract of the apportionment and shall certify the apportionment to the Division of Finance which shall draw its warrant in favor of the County Treasurer for each county for the amount apportioned thereto. If the Superintendent of Public Instruction determines that the requests for monies are inconsistent with program levels in the current year, he shall reduce the excess cost of such district; which reduced excess cost shall be used as the basis to provide state monies

for program levels consistent with the program levels offered by the school district in the current year plus an allowance for reasonable growth.

For a district which does not offer special education in the current year, the Superintendent of Public Instruction shall determine the program level for special education for the school district budget year which is consistent with costs of similar programs offered by other school districts. Amounts budgeted in the special education portion of the school district budget as provided in Section 15-1201 shall be exempt from the budget cost level.

Contracted monies budgeted and received from cooperating school districts by a school district acting as either fiscal or administrative agent for an intergovernmental agreement pursuant to Section 11-952 for the provision of programs provided for in Section 15-1015, Subsection D, Paragraph 1, shall be exempt from the budget cost level.

Each district shall utilize the Revised Budget (RB) forms exhibited in Section V, Special Education Forms. They include the following:

RB-5 Official Worksheet for Assistance Computation and Budget Requirements for Special Education Handicapped Programs.

RB-6 Official Worksheet for Assistance Computation and Budget Requirements for Special Education Gifted Programs.

RB-7 (1) Maintenance and Operation Budget 11 Special Education.

(2) Maintenance and Operation Budget Worksheets.

RB-9 Special Education Worksheet to Determine Pro-rated Costs for Self-Contained Handicapped.

Transportation

Transportation costs as defined in Chapter 16, Article 2 shall be contained in a separate transportation budget. In accordance with ARS 15-1621, handicapped children, as defined by Section 15-1011, transported by or for the school district who qualify as full-time students or fractional students regardless of location or residence within the district shall be counted in a district's computation of daily route mileage to qualify for state transportation aid.

APPENDIX D

FORMAT FOR COMPUTING EXCESS COST OF SPECIAL EDUCATION IN ARIZONA

APPENDIX D

FORMAT FOR COMPUTING EXCESS COST OF

SPECIAL EDUCATION IN ARIZONA

OFFICIAL WORKSHEET FOR ASSISTANCE COMPUTATION AND BUDGET REQUIREMENTS FOR SPECIAL EDUCATION HANDICAPPED PROGRAMS IN 1974-75

1. To Determine the ADM for Budgeting Instruction and Special Education in Subsections I and II.

   a. Estimated 1974-1975 ADM for Special Education Handicapped self-contained programs. Include ADM of handicapped, tuition students or contracted students not receiving any portion of educational programs in district of residence. _____

   b. Estimated 1974-1975 ADM Speech Handicapped _____

   c. Estimated 1974-1975 ADM for all Special Education Handicapped Resource Programs. _____

   d. Total Lines a, b, and c. (Total estimated 1974-1975 ADM for Special Education) _____

2. To Determine 1974-1975 Per Pupil Cost for Nonhandicapped Pupils:

   a. Enter the total Budgeted Cost for Instruction. (This is derived from the General Budget, Subsection I, Line 21, Instruction). $_____

   b. Enter the total Estimated 1974-1975 ADM for Nonhandicapped Pupils. (Total district ADM less self-contained Special Education ADM on Line 1a). _____

   c. Divide the amount of Line 2a by the ADM shown on Line 2b. (This determines the Nonhandicapped Per Pupil Cost). $_____

3. To Determine 1974-1975 Per Pupil Cost for Special Education Handicapped Programs.

   a. Enter the Total Budgeted Cost for Special Education Handicapped Programs. (This is derived from Subsection II Special Education (handicapped) Budget, Line 14). $ _____

   b. Add the Speech Handicapped ADM on Line 1b and Resource Program ADM on Line 1c. _____

   c. Multiply ADM on Line 3b by Nonhandicapped Per Pupil Cost on Line 2c. (To determine the cost of Special Education students in Subsection I, General Budget, Instruction). $ _____

   d. Add Lines 3a and 3c to determine total cost of Handicapped Pupils in district. $ _____

   e. Divide amount of Line 3d by ADM or Line 1d to determine actual per Handicapped Pupil cost of the district. $ _____

4. To determine the District Excess Cost for Handicapped Pupils:

   a. Enter the Handicapped Per Pupil cost from Line 3e. $ _____

   b. Enter the Nonhandicapped Per Pupil Cost from Line 2c. $ _____

   c. Subtract the amount on Line 4b from Line 4a. (This is the excess cost per Handicapped Pupil). $ _____

   d. Enter $797.15 for elementary school districts or $1,086.05 for high school districts. $ _____

(Continued)

5. To Determine Required State and District Assistance* for Special Education Programs:

   a. Multiply the estimated ADM for Handicapped on Line 1d by the amount shown on Line 4c or Line 4d, whichever amount is less. $_____

   b. Multiply the amount shown on Line 5a by 90%. (This determines State excess cost assistance for Handicapped Programs). $_____

   c. Multiply the ADM on Line 1a by the amount on Line 2c. $_____

   d. Add amounts shown on Lines 5b and 5c. (This is total required State and district assistance* for Special Education Handicapped Programs). $_____

   e. Subtract amount on Line 5d from the amount on Line 3a to determine additional revenue required for Special Education budget. $_____

Line 5c indicates amount from General Maintenance and Operation Revenues to be entered on Line 26 in General Maintenance and Operation Subsection and on Line 29 in Special Education Revised Subsection.

*District Assistance--means an amount equal to the instructional costs per Nonhandicapped Pupil multiplied by the total ADM for Handicapped Pupils on Line 2b.

APPENDIX E

APPORTIONMENT OF STATE FUNDS TO SCHOOL DISTRICTS FOR 1965-66 TO 1973-74

APPENDIX E

APPORTIONMENT OF STATE FUNDS TO SCHOOL DISTRICT FOR 1965-66 TO 1973-74

1965-66		
Trainable	$ 279,656.46	
Homebound	51,731.80	
Special Education	631,298.75	
		$ 962,687.01
1966-67		
Trainable	$ 314,921.35	
Homebound	52,301.70	
Special Education	734,218.14	
		$1,101,441.19
1967-68		
Trainable	$ 396,088.83	
Homebound	47,588.00	
Special Education	836,929.48	
		$1,280,606.31
1968-69		
Trainable	$ 392,062.07	
Homebound	35,641.90	
Special Education	924,825.38	
		$1,352,529.36
1969-70		
Trainable	$ 438,837.28	
Homebound	40,198.70	
Special Education	953,276.93	
		$1,432,312.91

Source: Annual Report of the Superintendent of Public Instruction, 1965-66 through 1973-74.

APPORTIONMENT OF STATE FUNDS TO SCHOOL DISTRICTS

FOR 1965-66 TO 1973-74

1970-71		
Trainable	$ 564,280.62	
Homebound	195,055.54	
Special Education	2,041,046.88	
		$2,800,383.04
1971-72		
Trainable	$ 650,948.07	
Homebound	204,853.85	
Special Education	2,164,704.22	
Special Education	13,626.64	
Gifted	10,120.35	
Speech	57,000.00	
		$3,101,253.13
1972-73		
Trainable	$ 752,832.09	
Homebound	233,466.86	
Special Education	2,279,049.62	
Special Education	12,764.06	
Gifted	29,730.35	
Speech	376,675.00	
SLD	404,270.60	
		$4,078,788.58
1973-74		
Trainable	$ 853,314.72	
Homebound	237,891.40	
Special Education	2,402,150.94	
Special Education	18,462.27	
Gifted	39,699.05	
Speech	428,025.00	
SLD	1,004,148.86	
VH	69,615.70	
HH	79,009.70	
		$5,132,317.64

APPENDIX F

STATE APPROPRIATIONS TO SPECIAL EDUCATION

FOR 1965-66 TO 1973-74

APPENDIX F

STATE APPROPRIATIONS TO SPECIAL EDUCATION FOR 1965-66 TO 1973-74

1965-66

Crippled Children (General Fund)

Maricopa	$ 30,000.00	
Pima	1,800.00	
Homebound	60,000.00	
Special Education	631,298.75	
Trainable	279,656.46	
		$1,002,755.21

1966-67

Crippled Children

Maricopa	$ 30,000.00	
Pima	1,800.00	
Homebound	63,000.00	
Special Education	734,218.14	
Trainable	314,921.35	
		$1,143,939.49

1967-68

Crippled Children

Maricopa	$ 30,000.00	
Pima	1,800.00	
Homebound	63,000.00	
Special Education	836,929.48	
Trainable	396,088.83	
		$1,327,818.31

Source: Annual Report of the Superintendent of Public Instruction, 1965-66 through 1973-74.

STATE APPROPRIATIONS TO SPECIAL EDUCATION

FOR 1965-66 TO 1973-74

1968-69

Crippled Children's Education Program		
Maricopa	$ 30,000.00	
Pima	1,800.00	
Homebound	60,000.00	
Special Education	92,825.38	
Trainable	400,000.00	
		$1,416,625.38

1969-70

Crippled Children's Education Program		
Maricopa	$ 30,000.00	
Pima	1,800.00	
Homebound	40,198.70	
Special Education	990,000.00	
Trainable	438,837.28	
		$1,500,835.98

1970-71

Crippled Children's Education Program		
Maricopa	$ 32,000.00	
Pima	1,800.00	
Homebound	199,314.55	
Special Education	2,264,384.29	
Trainable	616,497.75	
		$3,113,996.59

BIBLIOGRAPHY

Arizona Auditor General, State of Arizona School District Accounting Manual. Phoenix: Auditor General State of Arizona, September, 1973.

Arizona State Advisory Committee for Special Education, Status Report for Special Education, 1975. Phoenix: Arizona State Department of Education, 1975.

Arizona State Department of Education, Special Education Administration, Rules and Regulations. Phoenix: Arizona State Department of Education, 1974.

Bentley, Ronald W. "An Exploration of Relationships Between Expenditures for Exceptional Children and Expenditures for Regular Education Programs." Unpublished Doctoral dissertation, The University of Wisconsin, Madison.

Bernstein, Charles D. and Others. Financing Educational Services for the Handicapped. Palo Alto: Management Analysis Center, 1974.

Blake, Roy F. and Charles Essigs. Special Education: Planning for Programs. Tucson: Bureau of School Services, College of Education, The University of Arizona, 1975.

Clemmons, Alfred L. "An Assessment of Cost Variations in Selected Exemplary Special Education Programs in Six Selected Minnesota School Districts." Unpublished Doctoral dissertation, The University of New Mexico, Albuquerque, 1974.

Colorado State Department of Education, Status Report for Special Education, 1973-74. Denver: Colorado State Department of Education, 1974.

Cruickshank, W. M., and Johnson, G. O. (eds.) Education of Exceptional Children and Youth. 2nd ed. Englewood Cliffs: Prentice-Hall, Inc., 1967.

Decker, Colleen. "Model Meaning: Theory, Taxonomy, and Reconstruction." Unpublished Doctoral dissertation, University of Arizona, 1974.

Education Commission of the States. Financing Education Programs for Handicapped Children. Denver: Education Commission of the States, May, 1974.

Ernst and Ernst. A Model for the Determination of the Costs of Special Education as Compared With That for General Education. United States Department of Health, Education, and Welfare--Grant OEH-0-72-4874. Chicago: Ernst and Ernst, February, 1974.

Henderson, Robert A. Financing Special Education for Exceptional Pupils, Financing Education Programs for Handicapped Children. Denver: Education Commission of the States, May, 1974.

Johns, R. L., Alexander, K., and Rossmiller, R. (eds). Dimensions of Educational Needs. Gainesville: National Education Finance Project, 1969.

Kirk, Samuel A. Educating Exceptional Children. Boston: Houghton-Mifflin Co., 1962.

_____, and Johnson, B. C., Educating the Retarded Child. Cambridge: Houghton-Mifflin Company, 1951.

McLure, William (director), Robert A. Burnham, and Robert A. Henderson, Special Education: Needs, Costs, Methods of Financing. Urbana-Champaign: Bureau of Educational Research, College of Education, University of Illinois, 1975.

_____, and Pence, A. M. Early Childhood and Basic Elementary and Secondary Education. National Educational Finance Project, Special Study No. 1. Urbana, Illinois: Bureau of Educational Research, College of Education, University of Illinois, 1970.

Polley, John. Special Education Cost Study. New York: New York State Department of Special Education, 1968.

Rochester Board of Education. Cost of Special Education Programs in the Rochester Public Schools. Rochester: Rochester Public Schools, 1968.

Rossmiller, Richard A., Hale, James A., and Frohreich, Lloyd. Educational Programs for Exceptional Children: Resource Configurations and Costs. Madison: University of Wisconsin, 1970.

_____. Coming to Grips with Costs and Expenditures. Financing Educational Programs for Handicapped Children. Denver: Educational Commission of the States, May, 1974.

_____. "Resource Configurations and Costs in Educational Programs for Exceptional Children," Planning to Finance Education, eds. A. L. Johns, K. Alexander, and K. J. Jordan. Gainesville: National Educational Finance Project, 1971.

Saunders, T. Frank, and Colleen Decker. Double Think. Tucson: Farmington Press, 1973.

Sorenson, Frank W. A Cost Analysis of Selected Public School Special Education Systems. Springfield: State of Illinois, Office of the Superintendent of Public Instruction, 1973.